

## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Sin J. Lee Examiner #: 76060 Date: 5-25-04  
 Art Unit: 1752 Phone Number: 301-2-1333 Serial Number: PCT/US 03/33676  
 Mail Box and Bldg/Room Location: 9D60 Results Format Preferred (circle) PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need. ①

\*\*\*\*\*  
 Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc. if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Photoresist containing Sulfonamide component

Inventors (please provide full names): Barclay, George G.

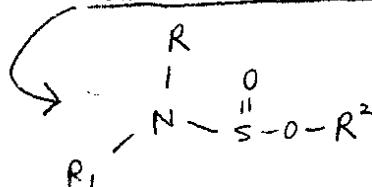
Earliest Priority Filing Date: 10-21-03 (10-21-02: Provisional)

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

- Please search for a composition comprising

- ① a polymer that comprises one or more Si atoms and
- ② a ~~component~~ that comprises one or more

Sulfonamide groups



$R_1$  = Chemical bond, alkylene, or heteroalkylene (to provide linkage to the polymer)

or  
 it can be a terminating gp.  
 Such as H atom or

alkyl, heteroalkyl, aryl, aralkyl,

$R_2$  = Same as defined for  $R_1$ .

$R^2$  = H or alkyl, heteroalkyl, aryl, aralkyl

\* this second component can be a distinct component from the polymer ① (in this case the second component can be a monomer or a polymer)

or the second component can be part of the polymer

① (i.e., the polymer can have both the Si atoms and the Sulfonamide groups

## STAFF USE ONLY

Searcher: ES

Searcher Phone #: \_\_\_\_\_

Searcher Location: \_\_\_\_\_

Date Searcher Picked Up: \_\_\_\_\_

Date Completed: 5-26-04

Searcher Prep & Review Time: 5

Clerical Prep Time: \_\_\_\_\_

Online Time: 115

## Type of Search

NA Sequence (#) \_\_\_\_\_ STN \$523.30

AA Sequence (#) \_\_\_\_\_ Dialog \_\_\_\_\_

Structure (#) ✓ (3) Questel/Orbit \_\_\_\_\_

Bibliographic ✓ (and) D Link \_\_\_\_\_

Litigation \_\_\_\_\_ Lexis/Nexis \_\_\_\_\_

Fulltext \_\_\_\_\_ Sequence Systems \_\_\_\_\_

Patent Family \_\_\_\_\_ WWW/Internet \_\_\_\_\_

Other \_\_\_\_\_ Other (specify) \_\_\_\_\_

Vendors and cost where applicable

=> file reg

FILE 'REGISTRY' ENTERED AT 21:39:29 ON 26 MAY 2004  
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=> display history full ll-

FILE 'HCAPLUS' ENTERED AT 20:18:01 ON 26 MAY 2004  
L1 1642 SEA BARCLAY ?/AU  
L2 89 SEA KANAGASABAPATHY ?/AU  
L3 7 SEA L1 AND L2  
SEL L3 1 RN

FILE 'REGISTRY' ENTERED AT 20:19:03 ON 26 MAY 2004  
L4 4 SEA (10025-78-2/BI OR 107-11-9/BI OR 124-63-0/BI OR

FILE 'HCAPLUS' ENTERED AT 20:28:01 ON 26 MAY 2004  
L5 161926 SEA RESIST OR RESISTS OR PHOTORESIST? OR MASK? OR  
PHOTOMASK?  
L6 8020 SEA ?SILSESQUIOXAN?  
L7 54699 SEA ?SULFONAMID? OR ?SULPHONAMID?  
L8 10625 SEA (SILICON OR SI) (2A) (POLYM? OR COPOLYM? OR HOMOPOLYM?  
OR TERPOLYM? OR RESIN? OR GUM#)  
L9 303 SEA L7 AND L5  
L10 1 SEA L9 AND L6  
L11 1 SEA L9 AND L8  
L12 186609 SEA ?SILOXAN? OR ?SILICONE?  
L13 13 SEA L9 AND L12

FILE 'REGISTRY' ENTERED AT 20:30:14 ON 26 MAY 2004  
L14 69191 SEA SI/ELS AND PMS/CI

FILE 'HCAPLUS' ENTERED AT 20:30:43 ON 26 MAY 2004  
L15 61097 SEA L14  
L16 9 SEA L9 AND L15

FILE 'BEILSTEIN' ENTERED AT 20:31:48 ON 26 MAY 2004  
L17 STR

FILE 'REGISTRY' ENTERED AT 20:34:15 ON 26 MAY 2004  
L18 50 SEA SSS SAM L17

FILE 'LREGISTRY' ENTERED AT 20:35:33 ON 26 MAY 2004  
E SULFONAMIDE/CN  
L19 1 SEA SULFONAMIDE/CN

## E SULFONAMIDE

L20 1120 SEA SULFONAMIDE/BI  
L21 STR

FILE 'REGISTRY' ENTERED AT 21:03:12 ON 26 MAY 2004

L22 50 SEA SSS SAM L21  
L23 SCR 1788  
L24 SCR 1942  
L25 50 SEA SSS SAM L21 AND L23  
L26 50 SEA SSS SAM L21 AND L23 AND L24  
L27 SCR 1841  
L28 50 SEA SSS SAM L21 AND L23 AND L24 NOT L27  
L29 SCR 1918  
L30 50 SEA SSS SAM L21 AND L23 AND L24 NOT (L27 OR L29)  
L31 SCR 1874  
L32 50 SEA SSS SAM L21 AND L23 AND L24 NOT (L27 OR L29 OR L31)  
SEL L4 2 RN  
L33 1 SEA 421-83-0/BI  
SEL L4 3 RN  
L34 1 SEA 124-63-0/BI  
SEL L4 4 RN  
L35 1 SEA 107-11-9/BI  
E VINYLAMINE/CN  
L36 1 SEA VINYLAMINE/CN

FILE 'HCAPLUS' ENTERED AT 21:12:21 ON 26 MAY 2004

L37 4699 SEA L33 OR L34  
L38 4436 SEA L35 OR L36  
L39 47 SEA L37 AND L38  
L40 2 SEA L39 AND (L6 OR L8 OR L15)

FILE 'REGISTRY' ENTERED AT 21:13:55 ON 26 MAY 2004

L41 SCR 1267 OR 1312  
L42 50 SEA SSS SAM L21 AND L23 NOT (L27 OR L29 OR L31 OR L41)  
L43 SCR 1267  
L44 50 SEA SSS SAM L21 AND L23 NOT (L27 OR L29 OR L31 OR L43)  
L45 STR L21  
L46 50 SEA SSS SAM L45 AND L23 NOT (L27 OR L29 OR L31 OR L43)  
L47 239164 SEA SSS FUL L45 AND L23 NOT (L27 OR L29 OR L31 OR L43)  
SAV TEM L47 LEE676/A  
L48 222 SEA L47 AND L14

FILE 'HCAPLUS' ENTERED AT 21:31:21 ON 26 MAY 2004

L49 94 SEA L48  
L50 14 SEA L49 AND L5

FILE 'REGISTRY' ENTERED AT 21:32:11 ON 26 MAY 2004

L51 235733 SEA L47 NOT PMS/CI

FILE 'HCAPLUS' ENTERED AT 21:32:25 ON 26 MAY 2004

L52 106689 SEA L51  
 L53 272 SEA (L6 OR L8 OR L15) AND L52  
 L54 24 SEA L53 AND L5  
 L55 11 SEA L10 OR L11 OR L16 OR L40  
 L56 21 SEA (L13 OR L50) NOT L55  
 L57 17 SEA L54 NOT (L55 OR L56)

FILE 'REGISTRY' ENTERED AT 21:39:29 ON 26 MAY 2004

=> d 147 que stat

L23 SCR 1788  
 L27 SCR 1841  
 L29 SCR 1918  
 L31 SCR 1874  
 L43 SCR 1267  
 L45 STR

4  
 O  
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 || 2  
 N---S---C  
 1 || 3  
 ||  
 O  
 5

#### NODE ATTRIBUTES:

NSPEC IS RC AT 3  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

#### GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 5

#### STEREO ATTRIBUTES: NONE

L47 239164 SEA FILE=REGISTRY SSS FUL L45 AND L23 NOT (L27 OR L29 OR L31 OR L43)

100.0% PROCESSED 278079 ITERATIONS  
 SEARCH TIME: 00.00.02

239164 ANSWERS

=> file hcaplus

FILE 'HCAPLUS' ENTERED AT 21:40:40 ON 26 MAY 2004

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
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=> d 155 1-11 cbib abs hitstr hitind

L55 ANSWER 1 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN

2004:370969 **Photoresists** containing **sulfonamide**

component. Barclay, George G.; Kanagasabapathy, Subbareddy (Shipley Company L.L.C., USA). PCT Int. Appl. WO 2004037866 A2 20040506, 41 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2003-US33676 20031021. PRIORITY: US 2002-PV420056 20021021.

AB The present invention relates to **photoresist** compns. that contain one or more components having **sulfonamide** and Si substitution. Preferred **photoresist** compns. of the invention contain an **Si-polymer** such as a **silsesquioxane** that has **sulfonamide** substitution and may be employed in multilayer **resist** systems. In preferred aspects, the **Si-polymer** has both **sulfonamide** substitution as well as moieties that can provide contrast upon exposure to photogenerated acid.

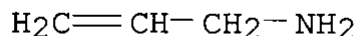
*applicant*

IT INDEXING IN PROGRESS

IT 107-11-9, Allyl amine 124-63-0,  
Methanesulfonylchloride 421-83-0,  
Trifluoromethanesulfonylchloride  
(prepn. of **sulfonamide** component for  
**photoresists**)

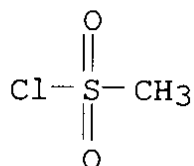
RN 107-11-9 HCAPLUS

CN 2-Propen-1-amine (9CI) (CA INDEX NAME)

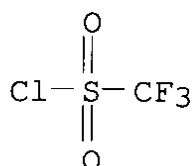


RN 124-63-0 HCAPLUS

CN Methanesulfonyl chloride (6CI, 8CI, 9CI) (CA INDEX NAME)



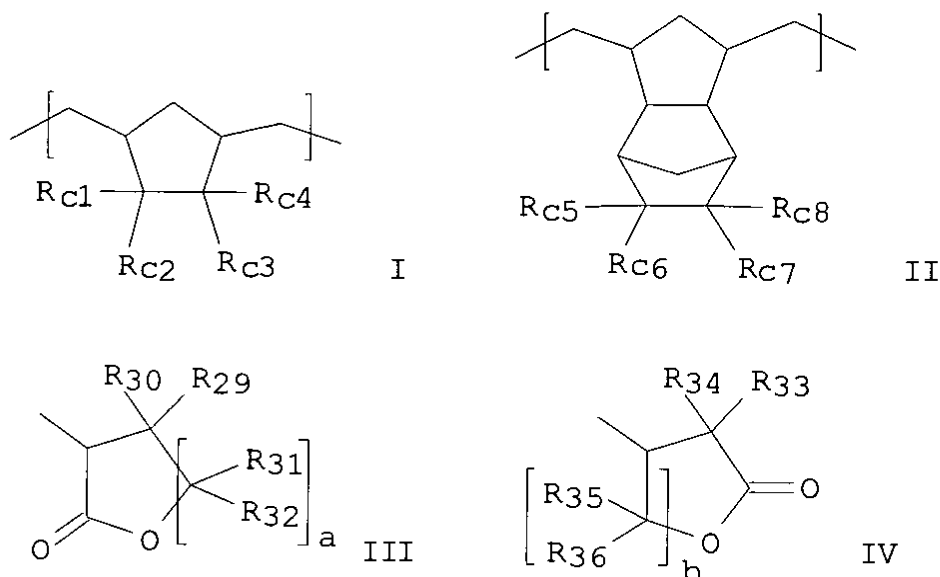
RN 421-83-0 HCAPLUS  
 CN Methanesulfonyl chloride, trifluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



IC ICM C08F  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 ST **photoresist sulfonamide** component  
     **silsesquioxane**  
 IT **Photoresists**  
     (photoresists contg. **sulfonamide** component)  
 IT **Silsesquioxanes**  
     (photoresists contg. **sulfonamide** component)  
 IT 107-11-9, Allyl amine 124-63-0,  
 Methanesulfonylchloride 421-83-0,  
 Trifluoromethanesulfonylchloride 10025-78-2, Trichlorosilane  
     (prepn. of **sulfonamide** component for  
     **photoresists**)

L55 ANSWER 2 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN  
 2001:541843 Document No. 135:129573 Deep UV positive  
**photoresist** compositions containing norbornene- or  
 dicyclopentadiene-based polymers. Mizutani, Kazuyoshi (Fuji Photo  
 Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2001201855 A2  
 20010727, 30 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP  
 2000-8239 20000117.

GI



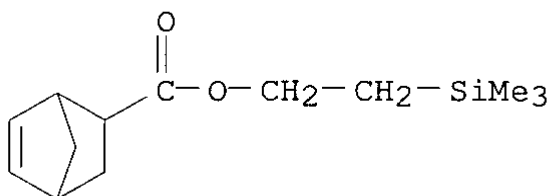
- AB The **photoresist** compns. contain (A) active light- or radiation-sensitive acid generators and (B) resins whose solubilities into alk. solns. are increased by acidolysis and which involve repeating units norbornene derivs. I and/or dicyclopentadiene derivs. II [ $R_{c1}-R_{c8} = H$ , (substituted)-alkyl, (substituted) cyclohydrocarbyl, halo, cyano,  $CO_2H$ ,  $C(O)YAR_{c9}$ ,  $C(O)YACO_2(CH_2)_2SiR_1R_2R_3$ ,  $CO_2R_{c11}$ ,  $CO_2(CH_2)_2SiR_1R_2R_3$ ;  $\geq 1$  of  $R_{c1}-R_{c4} = C(O)YACO_2(CH_2)_2SiR_1R_2R_3$  or  $CO_2(CH_2)_2SiR_1R_2R_3$ ;  $\geq 1$  of  $R_{c5}-R_{c8} = C(O)YACO_2(CH_2)_2SiR_1R_2R_3$  or  $CO_2(CH_2)_2SiR_1R_2R_3$ ;  $R_1-R_3 =$  alkyl, trialkylsilyl, trialkylsilyloxy;  $Y = O, S, NH, NHSO_2, NHSO_2NH$ ;  $R_{c9} = CO_2H, CO_2R_{c10}$  ( $R_{c10} =$  same as  $R_{c11}$  or lactones III or IV),  $CN, OH$ , (substituted)-alkoxyl,  $CONHR_{c11}$ ,  $CONHSO_2R_{c11}$ , or lactones III or IV;  $R_{c11} =$  (substituted) alkyl, (substituted) cycloalkyl;  $A =$  single bond; alkylene, substituted alkylene,  $O, S, CO, CO_2$ , amide, **sulfonamide**, urethane, urea;  $R_{29}-R_{36} = H$ , alkyl;  $a, b = 1, 2$ ]. The compns. may further contain (C) org. bases, (D) silicone-based, F-contg., or nonionic surfactants and (E) org. solvents. In the bilayer **resist** process, pattern shift on pattern transfer to underlayers while  $O$  plasma etching is minimized. Its pattern formation on i-ray **resist** coated on a Si wafer by exposing to ArF excimer laser was exemplified.
- IT **351195-80-7DP**, hydrogenated  
(deep UV pos. **photoresist** compns. contg. norbornene- or dicyclopentadiene-based polymers)
- RN **351195-80-7 HCAPLUS**
- CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-methoxyethyl ester, polymer with 2-(trimethylsilyl)ethyl bicyclo[2.2.1]hept-5-ene-2-

carboxylate (9CI) (CA INDEX NAME)

CM 1

CRN 327023-46-1

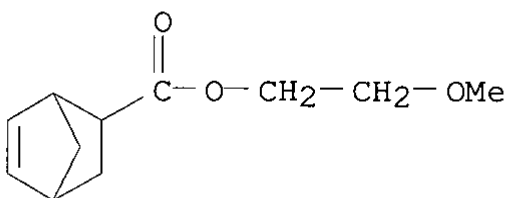
CMF C13 H22 O2 Si



CM 2

CRN 46276-02-2

CMF C11 H16 O3



IT **351195-81-8D**, hydrogenated **351195-82-9D**,  
hydrogenated **351195-84-1D**, hydrogenated  
(deep UV pos. **photoresist** compns. contg. norbornene- or  
dicyclopentadiene-based polymers)

RN 351195-81-8 HCAPLUS

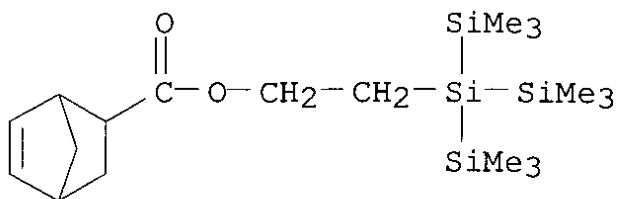
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-cyanoethyl ester,  
polymer with 2-[2,2,2-trimethyl-1,1-bis(trimethylsilyl)disilanyl]eth  
yl bicyclo[2.2.1]hept-5-ene-2-carboxylate (9CI) (CA INDEX NAME)

CM 1

CRN 337954-57-1

CMF C19 H40 O2 Si4

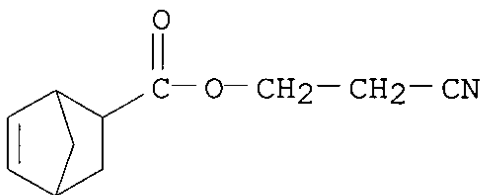




CM 2

CRN 303154-39-4

CMF C11 H13 N O2



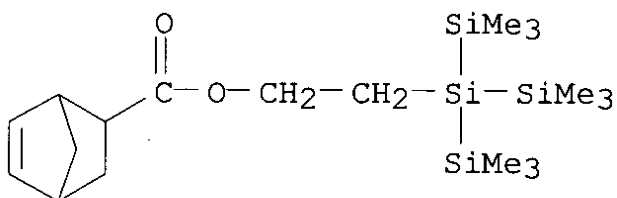
RN 351195-82-9 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2,3-dicarboxylic acid, mono(2-hydroxyethyl) ester, polymer with 2-[2,2,2-trimethyl-1,1-bis(trimethylsilyl)disilanyl]ethyl bicyclo[2.2.1]hept-5-ene-2-carboxylate (9CI) (CA INDEX NAME)

CM 1

CRN 337954-57-1

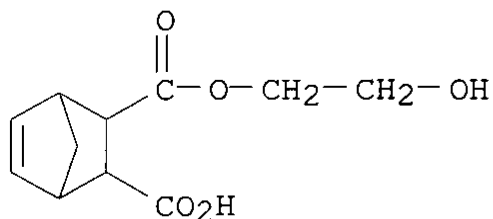
CMF C19 H40 O2 Si4



CM 2

CRN 260065-19-8

CMF C11 H14 O5



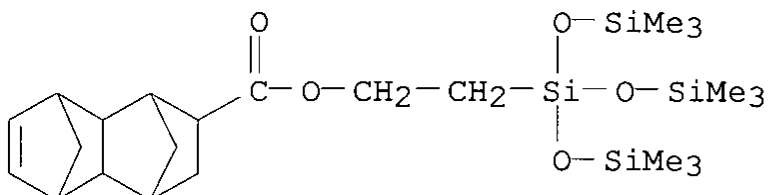
RN 351195-84-1 HCAPLUS

CN 1,4:5,8-Dimethanonaphthalene-2-carboxylic acid, 1,2,3,4,4a,5,8,8a-octahydro-, 2-[tris(trimethylsilyl)oxy]silyl]ethyl ester, polymer with 2-methoxyethyl bicyclo[2.2.1]hept-5-ene-2-carboxylate (9CI) (CA INDEX NAME)

CM 1

CRN 351195-83-0

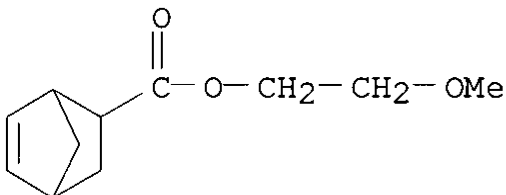
CMF C24 H46 O5 Si4



CM 2

CRN 46276-02-2

CMF C11 H16 O3



IC ICM G03F007-039

- ICS G03F007-004; G03F007-095; G03F007-26; H01L021-027  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
ST deep UV pos **photoresist** norbornene polymer;  
cyclopentadiene trimethylsilylethyl acrylate reaction polymn  
**photoresist**; methoxyethyl acrylate cyclopentadiene reaction  
polymn **photoresist**; dicyclopentadiene polymer deep UV pos  
**photoresist**; argon fluoride excimer laser  
**photoresist**  
IT Polysiloxanes, uses  
(KP 341, surfactants; deep UV pos. **photoresist** compns.  
contg. norbornene- or dicyclopentadiene-based polymers)  
IT Positive **photoresists**  
(UV; deep UV pos. **photoresist** compns. contg.  
norbornene- or dicyclopentadiene-based polymers)  
IT Cycloalkenes  
(polymers; deep UV pos. **photoresist** compns. contg.  
norbornene- or dicyclopentadiene-based polymers)  
IT **351195-80-7DP**, hydrogenated  
(deep UV pos. **photoresist** compns. contg. norbornene- or  
dicyclopentadiene-based polymers)  
IT **351195-81-8D**, hydrogenated **351195-82-9D**,  
hydrogenated **351195-84-1D**, hydrogenated  
(deep UV pos. **photoresist** compns. contg. norbornene- or  
dicyclopentadiene-based polymers)  
IT 57840-38-7 66003-76-7 66003-78-9 144089-15-6 153698-46-5  
335385-79-0 335385-81-4 335385-82-5  
(photoacid generator; deep UV pos. **photoresist** compns.  
contg. norbornene- or dicyclopentadiene-based polymers)  
IT 484-47-9, 2,4,5-Triphenylimidazole 1122-58-3, 4-  
Dimethylaminopyridine 6674-22-2, 1,8-Diazabicyclo[5.4.0]undec-7-  
ene  
(polymer dissoln. promoters; deep UV pos. **photoresist**  
compns. contg. norbornene- or dicyclopentadiene-based polymers)  
IT 121-46-0, Norbornadiene 3121-61-7, 2-Methoxyethyl acrylate  
131494-24-1, 2-(Trimethylsilyl)ethyl acrylate  
(starting materials for monomer prepn.; deep UV pos.  
**photoresist** compns. contg. norbornene- or  
dicyclopentadiene-based polymers)  
IT 9016-45-9, Poly(oxyethylene) nonylphenyl ether 137462-24-9,  
Megafac F 176 216679-67-3, Megafac R 08  
(surfactants; deep UV pos. **photoresist** compns. contg.  
norbornene- or dicyclopentadiene-based polymers)

L55 ANSWER 3 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STM  
1999:723097 Document No. 131:338442 Article having a polymeric matrix  
with alternating hydrophilic and hydrophobic surface regions and  
manufacture thereof. Huang, Tzu-Li J.; Ko, John H.; Zhu, Dong-Wei;

Fong, Bettie C. (3M Innovative Properties Company, USA). PCT Int. Appl. WO 9957185 A1 19991111, 41 pp. DESIGNATED STATES: W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1999-US9308 19990429. PRIORITY: US 1998-71968 19980504.

AB Title article, preferably having a patterned surface, has hydrophobic regions that can be sufficiently narrow such that moisture accumulated on the hydrophobic region migrates to the hydrophilic region, preventing the accumulation of water droplets under dew conditions. In frost conditions, the hydrophobic region remains relatively frost-free, thus maintaining at least partial transparency of the surface. The articles are useful as retroreflectors for signs or pavement markers, surgical or scuba masks, and windows (no data). The article is made by coating a substrate with a polymer precursor compn. contg. inorg. oxide particles, curing the coating, and removing at least a portion of the coating to expose inorg. oxide particles to form hydrophilic regions. Thus, a fluoropolymer compn. comprising 2-(N-methylperfluorooctane sulfonamido)ethyl acrylate 39, Norblock 7966 benzotriazole 5, silane A 174 5, acrylic acid 22, 3-mercaptopropionic acid 4, and Me methacrylate 25% was mixed with a 85:5:10 isopropenyl oxazoline-Et acrylate-Me methacrylate terpolymer and Nalco 2329 to give 25 wt.% colloidal silica, coated on a PET film, and cured, giving water contact angle 104 and 37 before and after corona treatment, resp.

IT 250242-88-7P 250242-89-8P 250242-90-1P  
(article coated with a polymeric matrix contg. inorg. oxide particles for alternating hydrophilic and hydrophobic surface regions)

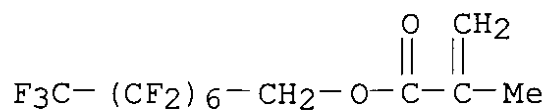
RN 250242-88-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-pentadecafluorooctyl ester, polymer with 2-hydroxyethyl 2-propenoate, 2-(hydroxymethyl)-2-[[[1-oxo-2-propenyl]oxy]methyl]-1,3-propanediyl di-2-propenoate and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 3934-23-4

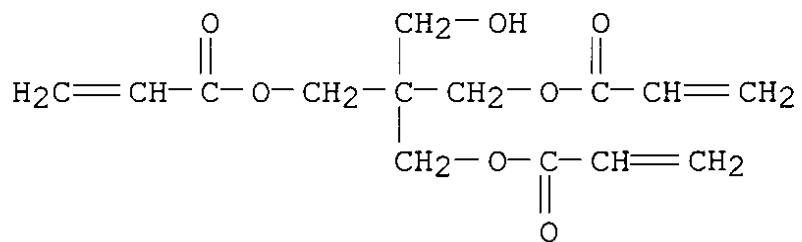
CMF C12 H7 F15 O2



CM 2

CRN 3524-68-3

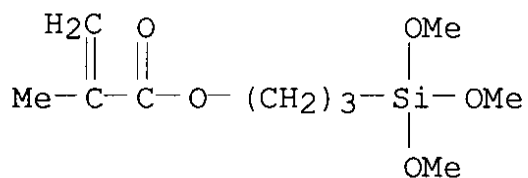
CMF C14 H18 O7



CM 3

CRN 2530-85-0

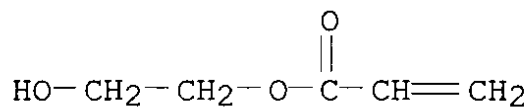
CMF C10 H20 O5 Si



CM 4

CRN 818-61-1

CMF C5 H8 O3



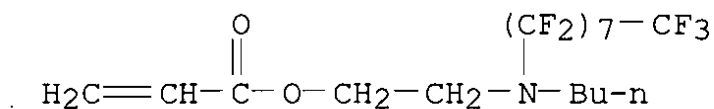
RN 250242-89-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with 2-[butyl(heptadecafluorooctyl)amino]ethyl 2-propenoate, 2-hydroxyethyl 2-propenoate and 2-(hydroxymethyl)-2-[[1-(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 101687-64-3

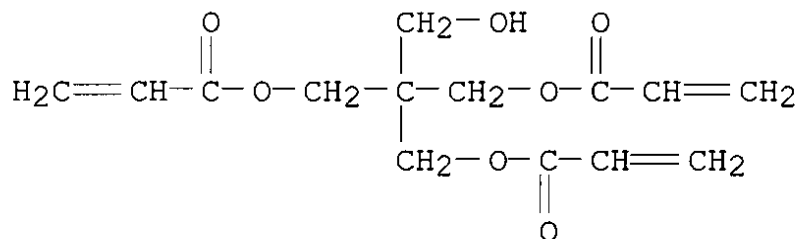
CMF C17 H16 F17 N O2



CM 2

CRN 3524-68-3

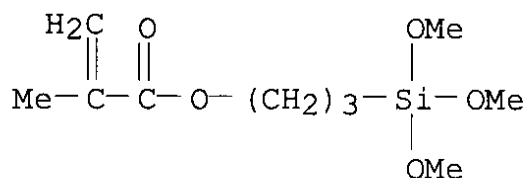
CMF C14 H18 O7



CM 3

CRN 2530-85-0

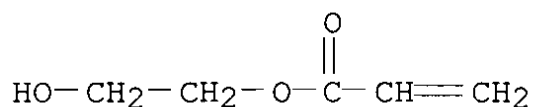
CMF C10 H20 O5 Si



CM 4

CRN 818-61-1

CMF C5 H8 O3



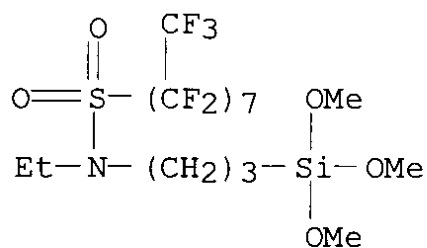
RN 250242-90-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptafluoro-N-[3-(trimethoxysilyl)propyl]-1-octanesulfonamide, 2-hydroxyethyl 2-propenoate and 2-(hydroxymethyl)-2-[[[1-oxo-2-propenyl)oxy)methyl]-1,3-propanediyl di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 61660-12-6

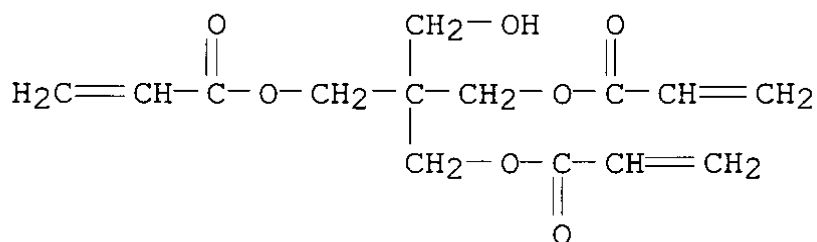
CMF C16 H20 F17 N O5 S Si



CM 2

CRN 3524-68-3

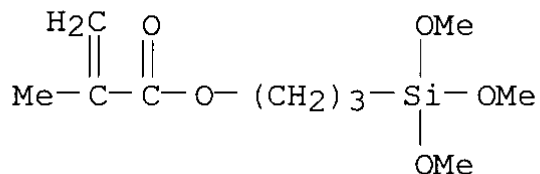
CMF C14 H18 O7



CM 3

CRN 2530-85-0

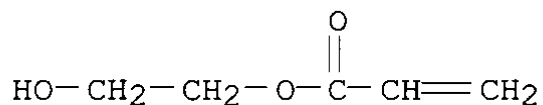
CMF C10 H20 O5 Si



CM 4

CRN 818-61-1

CMF C5 H8 O3



IC ICM C08K003-00

ICS C08J007-04

CC 42-13 (Coatings, Inks, and Related Products)

Section cross-reference(s): 58, 63

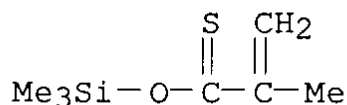
ST water shedding reflective coating traffic sign; acrylic  
 fluoropolymer silica filler reflective coating; hydrophilic  
 hydrophobic reflective coating; window water shedding coating;  
 surgical goggles water shedding coating; scuba **mask** water  
 shedding coating

IT Sporting goods

(scuba **masks**; article coated with a polymeric matrix  
 contg. inorg. oxide particles for alternating hydrophilic and



- hydrophobic surface regions)
- IT 250242-85-4P, 2-Carboxyethyl acrylate-ethyl acrylate-2-(N-ethylperfluorooctane **sulfonamido**)ethyl acrylate-isopropenyl oxazoline-methyl methacrylate copolymer  
250242-86-5P 250242-87-6P **250242-88-7P**  
**250242-89-8P 250242-90-1P**  
(article coated with a polymeric matrix contg. inorg. oxide particles for alternating hydrophilic and hydrophobic surface regions)
- L55 ANSWER 4 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN  
1998:685240 Document No. 130:8894 Positive-working **photoresist** composition for far UV exposure containing thioketone-containing acrylic polymer. Sato, Kenichiro; Fujinomori, Akira; Aogo, Toshiaki (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 10282673 A2 19981023 Heisei, 35 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1997-86687 19970404.
- AB The title compn., contg. a resin that is decompd. by the action of acid to increase the soly. in alkali and a compd. that generates acid upon active ray or radiation irradiation, employs a copolymer having repeating units of a monomer CH<sub>2</sub>:CR<sub>1</sub>AC'(:S)XCR<sub>2</sub>R<sub>3</sub>R<sub>4</sub> [R<sub>1</sub> = H, Me; R<sub>2</sub>-4 = H, (substituted) alkyl, cyclic alkyl; X = O or S; (A) = single bond, (substituted) alkylene, ether, thioether, carbonyl, ester, amido, **sulfonamide**, urethane, urea, group composed of ≥2 of these groups] and a monomer having a C≥7 aliph. cyclic hydrocarbon part in its mol. for the resin. The compn. shows high sensitivity toward far UV rays, esp. ArF excimer laser beams and provides high resolu. patterns with good profile and dry etch resistance.
- IT **215723-26-5P**  
(pos.-working **photoresist** compn. for far UV exposure contg. thioketone-contg. acrylic polymer)
- RN 215723-26-5 HCAPLUS
- CN 2-Propenoic acid, 2-methyl-, polymer with tricyclo[3.3.1.1<sup>3,7</sup>]decyl 2-methyl-2-propenoate and O-(trimethylsilyl) 2-methyl-2-propenethioate (9CI) (CA INDEX NAME)
- CM 1
- CRN 215723-25-4
- CMF C7 H14 O S Si

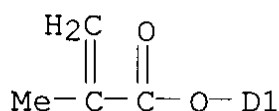
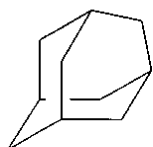


CM 2

CRN 71097-48-8

CMF C14 H20 O2

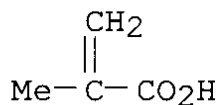
CCI IDS



CM 3

CRN 79-41-4

CMF C4 H6 O2



IC ICM G03F007-039

ICS G03F007-039; H01L021-027

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38

ST UV pos **photoresist** thioketone acrylic polymer; excimer laser **photoresist** thioketone acrylic polymer

IT **Photoresists**

(UV; pos.-working **photoresist** compn. for far UV exposure contg. thioketone-contg. acrylic polymer)

IT Positive **photoresists**

(pos.-working **photoresist** compn. for far UV exposure contg. thioketone-contg. acrylic polymer)

IT 215723-26-5P 215723-29-8P

(pos.-working **photoresist** compn. for far UV exposure contg. thioketone-contg. acrylic polymer)

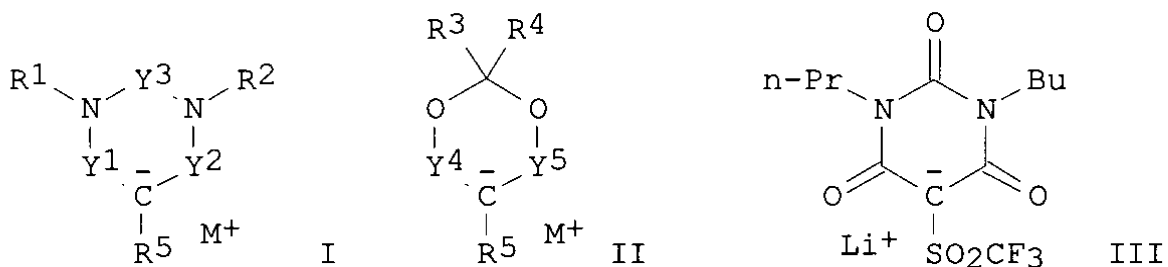
IT 79-41-4, reactions 585-07-9 19172-47-5, Lawesson's reagent  
215723-24-3

(pos.-working **photoresist** compn. for far UV exposure  
contg. thioketone-contg. acrylic polymer)

L55 ANSWER 5 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN

1998:466330 Document No. 129:109096 Preparation of salts of  
heterocyclic anions and their uses as ionic conductive materials.  
Armand, Michel; Choquette, Yves; Gauthier, Michel; Michot,  
Christophe (Centre National de la Recherche Scientifique (CNRS),  
Fr.; Hydro-Quebec). Eur. Pat. Appl. EP 850932 A1 19980701, 39 pp.  
DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI,  
LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO. (French). CODEN:  
EPXXDW. APPLICATION: EP 1997-403190 19971230. PRIORITY: CA  
1996-2194127 19961230; CA 1997-2199231 19970305.

GI



AB Salts of heterocyclic anions I and II [R1 = R2 = org. radical such  
as alkyl, fluoroalkyl; R3 = R4 = org. radical such as alkyl,  
fluoroalkyl; R3R4 = O; R5 = electron attracting group such as CN,  
alkylsulfonyl, fluoroalkylsulfonyl, acyl, polymer chain, etc.; Y1-5  
= CO, SO2, etc.; M = Li, K, ammonium, etc.] were prepd. for use as  
reaction catalysts, dyes, and photosensitizers. Thus, III was  
prepd. via condensation of 1-butylisocyanate, 1-propanamine, and  
malonyl dichloride to form 1-propyl-3-Bu barbituric acid, which was  
the reacted with trifluoromethanesulfonyl chloride followed by  
anhyd. LiCl.

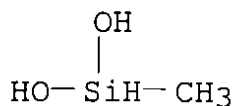
IT **156118-35-3DP**, hydrosilation products with  
5-trifluoroacetyl-3-allyl-1-butylbarbiturate  
(prepn. of salts of heterocyclic anions and their uses as ionic  
conductive materials)

RN 156118-35-3 HCAPLUS

CN Silanediol, dimethyl-, polymer with methylsilanediol (9CI) (CA  
INDEX NAME)

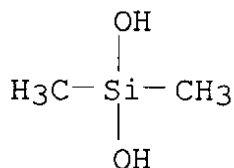
CM 1

CRN 43641-90-3  
CMF C H6 O2 Si



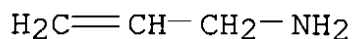
CM 2

CRN 1066-42-8  
CMF C2 H8 O2 Si

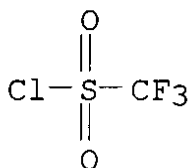


IT 107-11-9, Allyl amine 421-83-0,  
Trifluoromethanesulfonyl chloride 156118-35-3  
(prepn. of salts of heterocyclic anions and their uses as ionic  
conductive materials)

RN 107-11-9 HCAPLUS  
CN 2-Propen-1-amine (9CI) (CA INDEX NAME)



RN 421-83-0 HCAPLUS  
CN Methanesulfonyl chloride, trifluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX  
NAME)



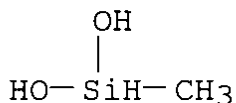
RN 156118-35-3 HCAPLUS

CN Silanediol, dimethyl-, polymer with methylsilanediol (9CI) (CA INDEX NAME)

CM 1

CRN 43641-90-3

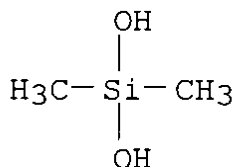
CMF C H6 O2 Si



CM 2

CRN 1066-42-8

CMF C2 H8 O2 Si



IC ICM C07D239-60

ICS C07D285-16; C07D285-15; C07D319-06; C07D327-00; C07D487-22;  
C07F007-18; C07F017-00; C09K003-00; H01M006-16; H01M010-40;  
C07B041-00; C08F004-00; C08J003-24; C08G073-02; C08F220-44;  
C08G075-00

CC 28-16 (Heterocyclic Compounds (More Than One Hetero Atom))  
Section cross-reference(s): 35, 41, 67, 74

IT 7060-82-4DP, ion exchange products with acrylonitrile  
5-(4-styrenesulfonyl)-2,2-trifluoromethyl-1,3-dioxolane-4,6-dione  
copolymer 89183-45-9DP, ion exchange products with  
1,3-di(2-ethylhexyl)-2-sulfonylbarbituric acid analog  
**156118-35-3DP**, hydrosilation products with  
5-trifluoroacetyl-3-allyl-1-butylbarbiturate 210048-53-6P  
210048-55-8DP, hydrosilation products dimethylsiloxane  
methylsiloxane copolymer 210048-59-2P 210048-60-5P  
210048-61-6P 210048-62-7P 210048-63-8P 210048-64-9P  
210048-65-0P 210048-66-1P 210048-67-2DP, ion exchange products  
polyaniline hydrochloride 210048-68-3P 210048-70-7P  
210048-72-9P 210048-73-0P 210048-74-1P 210048-75-2P  
210048-76-3P 210048-78-5P 210048-80-9DP, ion exchange products

with 3,7-bis(dimethylamino)phenothiazin-5-ium 210048-84-3P  
 210048-86-5P 210048-87-6P 210048-89-8P 210048-90-1P  
 210048-91-2P 210048-92-3P 210104-00-0P

(prepn. of salts of heterocyclic anions and their uses as ionic  
 conductive materials)

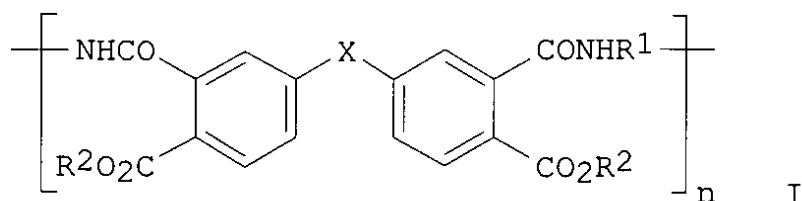
IT 75-75-2, Methylsulfonic acid 78-08-0, Vinyltriethoxysilane  
 78-94-4, 3-Buten-2-one, reactions 79-37-8, Oxalyl chloride  
 81-88-9, Rhodamine B 94-41-7, Chalcone 100-52-7, Benzaldehyde,  
 reactions 100-66-3, Anisole, reactions 102-54-5, Ferrocene  
 104-75-6, 2-Ethyl-1-hexanamine 105-53-3, Diethyl malonate  
 107-10-8, 1-Propanamine, reactions 107-11-9, Allyl amine  
 107-13-1, 2-Propenenitrile, reactions 108-24-7, Acetic anhydride  
 109-73-9, 1-Butanamine, reactions 110-18-9, TMEDA 111-36-4,  
 Butyl isocyanate 127-08-2, Potassium acetate 141-82-2,  
 Propanedioic acid, reactions 355-17-9 407-38-5,  
 2,2,2-Trifluoroethyl trifluoroacetate 421-50-1,  
 1,1,1-Trifluoroacetone 421-83-0, Trifluoromethanesulfonyl  
 chloride 422-03-7 434-45-7, 2,2,2-Trifluoroacetophenone  
 506-68-3, Cyanogen bromide 542-92-7, Cyclopentadiene, reactions  
 554-13-2, Lithium carbonate 584-08-7, Potassium carbonate  
 684-16-2, Hexafluoroacetone 685-88-1, Diethyl fluoromalonate  
 753-90-2, 2,2,2-Trifluoroethanamine 1483-72-3, Diphenyliodonium  
 chloride 1643-19-2, Tetrabutylammonium bromide 1663-67-8,  
 Malonyl chloride 2638-94-0, 4,4'-Azobis(4-cyanovaleric acid)  
 3240-34-4, Iodosobenzene diacetate 3724-43-4 7189-69-7,  
 1,1'-Sulfonyldiimidazole 7446-09-5, Sulfur dioxide, reactions  
 7447-40-7, Potassium chloride (KCl), reactions 7447-41-8, Lithium  
 chloride, reactions 7791-25-5, Sulfonyl dichloride 10147-40-7,  
 Dodecylsulfonyl chloride 13637-84-8, Chlorofluorosulfone  
 13781-67-4, 3-Thiopheneethanol 21797-13-7 27835-99-0, Nickel  
 (II) phthalocyaninetetrasulfonic acid, tetrasodium salt 29540-81-6  
 31469-15-5 60812-38-6 66415-55-2 82113-65-3,  
 Bis(trifluoromethanesulfonyl)imide 89183-45-9, Polyaniline  
 hydrochloride 134080-61-8 156118-35-3 210048-79-6  
 210048-96-7 210048-98-9 210048-99-0 210049-00-6

(prepn. of salts of heterocyclic anions and their uses as ionic  
 conductive materials)

L55 ANSWER 6 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN

1998:410748 Document No. 129:129013 Positive-working photosensitive  
 resin composition and polyimide film formation using it. Okabe,  
 Yoshiaki; Maegawa, Yasushige; Mitsuwa, Takao; Ueno, Isao; Langlade,  
 Geradine Rames (Hitachi, Ltd., Japan; Hitachi Chemical Co., Ltd.).  
 Jpn. Kokai Tokkyo Koho JP 10171116 A2 19980626 Heisei, 11 pp.  
 (Japanese). CODEN: JKXXAF. APPLICATION: JP 1996-331870 19961212.

GI



AB The title compn., developable with aq. alk. solns., contains a polyamic acid ester I [R1 = divalent org. group (55-85 mol% of R1 are CO2H); R2 = hydrophobic group; X = SO2; n = 6-570] and an o-quinonediazidosulfonamide R4(NR3R5)m and/or an o-quinonediazidosulfonamide sulfone ester (R3O)pR4(NR3R5)q (R3 = o-quinonediazidosulfonyl; R4 = C2-30 org. group; R5 = alkyl, H; m, q = 1-6; p = 1-5). The compn. may also contain an org. solvent and the total concn. of the polymer and the o-quinonediazidosulfonamide compd(s). may be 4-45 wt.%. A solid substrate is coated with the compn., pre-baked, exposed through a photomask, etched with an aq. alk. soln., and heat-treated to form a polyimide film. The compn. provides pos. polyimide relief patterns with good profile and is useful for semiconductor devices, etc.

IT 210154-27-1P

(quinonediazidosulfonamide-contg. pos.-working photosensitive polymer compn. for polyimide relief pattern formation)

RN 210154-27-1 HCAPLUS

CN Benzoic acid, sulfonylbis[2-(chlorocarbonyl)-, dibutyl ester, polymer with 3,5-diaminobenzoic acid, 4,4'-oxybis[benzenamine] and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

CM 1

CRN 201356-56-1

CMF C24 H24 Cl2 O8 S

CCI IDS

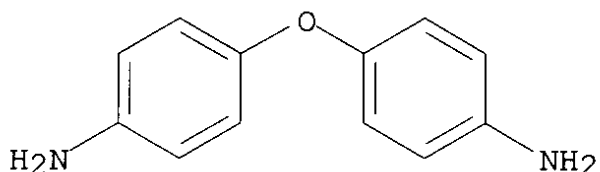




CM 4

CRN 101-80-4

CMF C12 H12 N2 O



IC ICM G03F007-022  
 ICS G03F007-037; G03F007-30; G03F007-40; H01L021-027; H01L021-312  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and  
 Other Reprographic Processes)  
 Section cross-reference(s): 38, 76  
 ST pos working **photoresist** polyimide film patterning;  
**quinonediazidosulfonamide** photosensitive polyamic acid  
 polyimide patterning  
 IT Positive **photoresists**  
 (quinonediazidosulfonamide-contg. pos.-working  
 photosensitive polymer compn. for polyimide relief pattern  
 formation)  
 IT Polyamic acids  
 Polyimides, preparation  
 (quinonediazidosulfonamide-contg. pos.-working  
 photosensitive polymer compn. for polyimide relief pattern  
 formation)  
 IT 125677-72-7P 125677-75-0P 200625-67-8P 202267-87-6P  
**210154-27-1P**  
 (quinonediazidosulfonamide-contg. pos.-working  
 photosensitive polymer compn. for polyimide relief pattern  
 formation)  
 IT 101-80-4 109-81-9, N-Methylethylenediamine 123-30-8 141-43-5,  
 reactions 3770-97-6  
 (quinonediazidosulfonamide-contg. pos.-working  
 photosensitive polymer compn. for polyimide relief pattern  
 formation)

L55 ANSWER 7 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN  
 1998:228990 Document No. 128:257824 Preparation of polyionic polymers  
 for use as photoinitiators. Vallee, Alain; Armand, Michel;  
 Ollivrin, Xavier; Michot, Christophe (Hydro-Quebec, Can.). Eur.  
 Pat. Appl. EP 834502 A2 19980408, 27 pp. DESIGNATED STATES: R: AT,

BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO. (French). CODEN: EPXXDW. APPLICATION: EP 1997-402311 19971002. PRIORITY: CA 1996-2187046 19961003.

AB The title polymers, esp. useful in the prodn. of **photoresists**, contain onium groups (iodonium, sulfonium, diazonium, organometallic cations) assocd. with anions of specified structure. Polystyrene (mol. wt. 6000) was iodinated, oxidized by H<sub>2</sub>O<sub>2</sub>-AcOH-Ac<sub>2</sub>O to give an iodoso acetate, treated (10 g) with 30 mL MeSO<sub>3</sub>H and 5 mL PhOBu at 0° for 4 h, and the resulting polyiodonium methanesulfate was stirred (8 g) with 10 g (C<sub>4</sub>F<sub>9</sub>SO<sub>2</sub>)<sub>2</sub>N-Li<sup>+</sup> in H<sub>2</sub>O for 1 h to give a polyiodonium bis(nonafluorobutanesulfonyl)imide. Use of the onium polymers in pos. and neg. **photoresists** is exemplified.

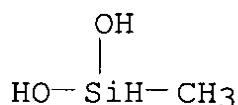
IT **156118-35-3DP**, Methylsilanediol-dimethylsilanediol copolymer, reaction products with allylferrocene and [bis(trifluoroacetoxy)iodo]benzene, disulfonyldiimide salts (prepn. of polyionic polymers for use as photoinitiators)

RN 156118-35-3 HCAPLUS

CN Silanediol, dimethyl-, polymer with methylsilanediol (9CI) (CA INDEX NAME)

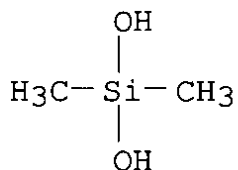
CM 1

CRN 43641-90-3  
CMF C H6 O2 Si



CM 2

CRN 1066-42-8  
CMF C2 H8 O2 Si



IC ICM C07C311-48  
ICS C08F014-16; C08F028-02; C08G077-04; G03F007-029; G03F007-039

- CC 35-4 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 67, 74
- ST cationic polyelectrolyte photoinitiator; iodonium polymer photoinitiator; onium polymer photoinitiator; **photoresist** photoinitiator onium polymer; polystyrene iodonium salt deriv; sulfonylimide salt iodonium polymer
- IT Negative **photoresists**  
Positive **photoresists**  
(prepn. of polyionic polymers for use as photoinitiators in **photoresists**)
- IT 70-11-1DP, Phenacyl bromide, reaction products with polythioethers, disulfonylimide salts 100-66-3DP, Anisole, reaction products with iodinated polystyrene, disulfonylimide salts 1126-79-0DP, Butoxybenzene, reaction products with iodinated polystyrene, disulfonylimide salts 2712-78-9DP, reaction products with Bu methacrylate-vinylferrocene copolymer, disulfonylimide salts 9003-53-6DP, onium derivs., disulfonylimide salts 12078-20-5DP, reaction products with poly(isopropylstyrene), disulfonylimide salts 30872-09-4DP, reaction products with bromocyclopentadienyliron dicarbonyl, disulfonylimide salts 39847-37-5DP, salts with onium polymers 39847-39-7DP, Bis(nonafluorobutanesulfonyl)imide, salts with onium polymers 42765-81-1DP, reaction products with Me hydrogen siloxanes, disulfonyldiimide salts 60805-12-1DP, salts with onium polymers 64328-73-0DP, reaction products with polythioethers, disulfonylimide salts 66604-62-4DP, Butyl methacrylate-vinylferrocene copolymer, reaction products with [bis(trifluoroacetoxy)iodo]benzene, disulfonylimide salts 67290-46-4DP, 4-Diazodiphenylamine chlorozincate-formaldehyde copolymer, disulfonylimide salts 82113-65-3DP, Bis(trifluoromethanesulfonyl)imide, salts with onium polymers 86303-86-8DP, reaction products with phenyliodoso toluenesulfonate 98806-81-6DP, reaction products with poly(phenoxyethyl vinyl ether) **156118-35-3DP**, Methylsilanediol-dimethylsilanediol copolymer, reaction products with allylferrocene and [bis(trifluoroacetoxy)iodo]benzene, disulfonyldiimide salts 205042-34-8P, 1,4-Bis(diacetoxyiodo)benzene-1,3-diphenylpropane copolymer tris(trifluoromethanesulfonyl)methane salt 205042-35-9DP, 1,2-Bis(2-chloroethoxy)ethane-1,6-hexanedithiol copolymer, reaction products with phenacyl bromide, disulfonylimide salts 205042-38-2P 205042-40-6P, [Bis(trifluoroacetoxy)iodo]benzene-1,2-diferrocenylethane copolymer bis(trifluoromethanesulfonyl)imide salt 205241-16-3DP, reaction products with iodonium polymers, disulfonylimide salts  
(prepn. of polyionic polymers for use as photoinitiators)
- IT 421-85-2, **Trifluoromethanesulfonamide**  
(reaction with sulfuryl chloride and hexafluoroisopropanol)
- IT 7791-25-5, Sulfuryl chloride  
(reaction with **trifluoromethanesulfonamide** and

hexafluoroisopropanol)  
IT 920-66-1  
(reaction with **trifluoromethanesulfonamide** and sulfuryl chloride)

L55 ANSWER 8 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN  
1998:228981 Document No. 128:257815 Preparation of fluorosulfonylimides and fluorosulfonylmethylides of onium compounds for use as photopolymerization catalysts. Vallee, Alain; Armand, Michel; Ollivrin, Xavier; Michot, Christophe (Hydro-Quebec, Can.). Eur. Pat. Appl. EP 834492 A2 19980408, 30 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO. (French). CODEN: EPXXDW. APPLICATION: EP 1997-402312 19971002. PRIORITY: CA 1996-2187046 19961003.

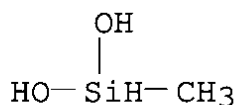
AB Fluorosulfonylimides and fluorosulfonylmethylides of onium compds. (iodonium, sulfonium, diazonium, organometallic, optionally polymeric) are prepd. for use as photoinitiators, esp. useful in **photoresists**. Stirring 15 g KN(SO<sub>2</sub>F)<sub>2</sub> with 21 g Ph<sub>2</sub>ICl in H<sub>2</sub>O at 0° in the absence of light for 1 h gave 91% Ph<sub>2</sub>I<sup>+</sup>(SO<sub>2</sub>F)<sub>2</sub>N<sup>-</sup>. Use of the products as photoinitiators in **photoresists** is exemplified.

IT **156118-35-3DP**, Dimethylsilanediol-methylsilanediol copolymer, reaction products with (allyloxyphenyl)phenyliodonium bis(fluorosulfonyl)imide (prepn. of fluorosulfonylimides and fluorosulfonylmethylides of onium compds. for use as photopolymn. catalysts)

RN 156118-35-3 HCAPLUS  
CN Silanediol, dimethyl-, polymer with methylsilanediol (9CI) (CA INDEX NAME)

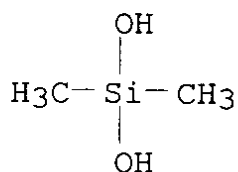
CM 1

CRN 43641-90-3  
CMF C H6 O2 Si



CM 2

CRN 1066-42-8  
CMF C2 H8 O2 Si



- IC ICM C07C025-18  
ICS C07C311-48; C07C381-12; C07F017-00; C08F220-12; C08F230-04;  
C08G077-24; G03F007-029; G03F007-039
- CC 35-3 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 25, 67, 74
- ST fluorosulfonylimide onium catalyst photopolymn;  
**photoresist** catalyst photopolymn; bisfluorosulfonylimide  
diphenyliodonium catalyst photopolymn; iodonium fluorosulfonylimide  
catalyst photopolymn
- IT Negative **photoresists**  
Positive **photoresists**  
(prepn. of fluorosulfonylimides and fluorosulfonylmethylides of  
onium compds. for use as photopolymn. catalysts in  
**photoresists**)
- IT 70-11-1DP, Phenacyl bromide, reaction products with polythioethers.  
bis(fluorosulfonyl)imide salts 2712-78-9DP, reaction products with  
Bu methacrylate-vinylferrocene copolymer, bis(fluorosulfonyl)imide  
salts 12156-05-7DP, 1,2-Diferrocenylenethane, reaction products with  
[bis(trifluoroacetoxy)iodo]benzene and K bis(fluorosulfonyl)imide  
66604-62-4DP, Butyl methacrylate-vinylferrocene copolymer, reaction  
products with [bis(trifluoroacetoxy)iodo]benzene and K  
bis(fluorosulfonyl)imide 75236-31-6DP, reaction products with  
potassium fluorosulfonylimides **156118-35-3DP**,  
Dimethylsilanediol-methylsilanediol copolymer, reaction products  
with (allyloxyphenyl)phenyliodonium bis(fluorosulfonyl)imide  
205042-35-9DP, reaction products with phenacyl bromide,  
fluorosulfonylimide salts 205042-38-2P 205057-02-9P  
205057-05-2P 205057-06-3P 205057-08-5P 205057-10-9P  
205057-12-1P 205057-13-2P 205057-14-3P 205247-60-5DP, reaction  
products with Me hydrogen polysiloxanes  
(prepn. of fluorosulfonylimides and fluorosulfonylmethylides of  
onium compds. for use as photopolymn. catalysts)
- IT 421-85-2, **Trifluoromethanesulfonamide**  
(reaction with sulfuryl chloride and hexafluoroisopropanol)
- IT 7791-25-5, Sulfuryl chloride  
(reaction with **trifluoromethanesulfonamide** and  
hexafluoroisopropanol)
- IT 920-66-1, 1,1,1,3,3,3-Hexafluoro-2-propanol  
(reaction with **trifluoromethanesulfonamide** and sulfuryl  
chloride)

L55 ANSWER 9 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN

1997:536946 Document No. 127:206907 Finishing carpets with inorganic additives for lasting soil resistance. Wang, Shou-Lu G.; Engle, Lori P.; Hamrock, Steven J.; Zhu, Dong-Wei; Wood, Thomas E.; Martin, Steven J. (Minnesota Mining and Manufacturing Co., USA). PCT Int. Appl. WO 9728303 A1 19970807, 61 pp. DESIGNATED STATES: W: AU, BR, CA, JP, MX; RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-US20916 19961231. PRIORITY: US 1996-595592 19960201.

AB Soil-resistant carpets are prep'd. by treating carpets with oil residue content  $\geq 0.3\%$  with compns. contg.  $\geq 1$  inorg. additive using a low wet pick-up method. An unscoured polypropylene carpet was spray coated with a compn. contg. Nalco 2326 (colloidal silica; particle size 5 nm; particle agglomerate area 600 m<sup>2</sup>/g) to solids content 0.75% to give a carpet exhibiting  $\Delta\Delta E$  value (colorimetric  $\Delta E$  value of the soiled treated unscoured carpet and  $\Delta E$  value of the soiled untreated scoured carpet) 0.55.

IT **186901-87-1**, Methacrylic acid-silica graft copolymer (soilproofing agent; finishing carpets with oxides of silicon, aluminum, zirconium, titanium or tin or basic metal salts for lasting soil resistance)

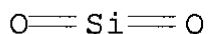
RN 186901-87-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with silica, graft (9CI) (CA INDEX NAME)

CM 1

CRN 7631-86-9

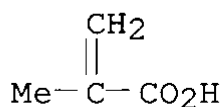
CMF O2 Si



CM 2

CRN 79-41-4

CMF C4 H6 O2



IT **194346-51-5**

(stain blocker; finishing carpets with oxides of silicon, aluminum, zirconium, titanium or tin or basic metal salts for lasting soil resistance)

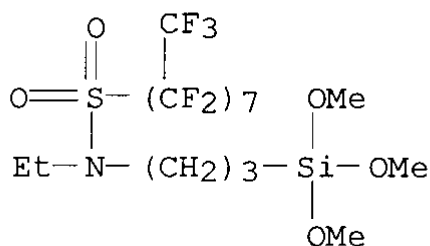
RN 194346-51-5 HCAPLUS

CN 1-Octanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptafluoro-N-[3-(trimethoxysilyl)propyl]-, polymer with  $\alpha$ -methyl- $\omega$ -hydroxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 61660-12-6

CMF C16 H20 F17 N O5 S Si

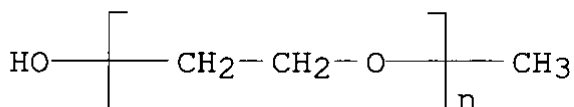


CM 2

CRN 9004-74-4

CMF (C2 H4 O)<sub>n</sub> C H4 O

CCI PMS



IC ICM D06M011-79

ICS D06M011-45; D06M011-46

CC 40-9 (Textiles and Fibers)

IT **186901-87-1**, Methacrylic acid-silica graft copolymer  
(soilproofing agent; finishing carpets with oxides of silicon, aluminum, zirconium, titanium or tin or basic metal salts for lasting soil resistance)

IT 107-21-1DP, 1,2-Ethanediol, polymers with reaction products of S\Desmodur N 3300 and N-methyl-N-(2-hydroxyethyl)

**perfluorooctylsulfonamide**, uses 24448-09-7DP, reaction products with Desmodur N 300, polymers with ethylene glycol

104559-01-5DP, Desmodur N 3300, reaction products with N-methyl-N-(2-hydroxyethyl)**perfluorooctylsulfonamide**, polymers with ethylene glycol

(stain blocker; finishing carpets with oxides of silicon, aluminum, zirconium, titanium or tin or basic metal salts for lasting soil resistance)

IT 124-04-9D, Adipic acid, esters, fluoropolymers 25087-26-7, Poly(methacrylic acid) 136797-56-3, Scotchgard FC 247 179530-37-1, Stain **Resist** SR 300 194554-41-1, FC 364 194554-43-3, Stain Release Concentrate FC 657 194554-44-4, Stain Release Concentrate FC 661 194554-46-6, Dyetech 97H

(stain blocker; finishing carpets with oxides of silicon, aluminum, zirconium, titanium or tin or basic metal salts for lasting soil resistance)

IT **194346-51-5** 194554-42-2, FC 365

(stain blocker; finishing carpets with oxides of silicon, aluminum, zirconium, titanium or tin or basic metal salts for lasting soil resistance)

L55 ANSWER 10 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN

1995:531974 Document No. 122:267436 Electric circuit structures having photosensitive heat-resistant polyimide compositions for surface protection,  $\alpha$ -ray shielding, or insulation and manufacture thereof. Yoshikawa, Haruhiko; Kataoka, Fumio; Shoji, Fusaji; Obara, Isao; Tanaka, Jun (Hitachi Ltd, Japan). Jpn. Kokai Tokkyo Koho JP 06181264 A2 19940628 Heisei, 36 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1992-332714 19921214.

AB The title cured compns. are formed from 100 parts polymers of main repeating unit -COR1(CO2H)2CONHR2NH- (R1 = C $\geq$ 4 tetravalent org. group; R2 = arom ring or Si-contg. divalent org. group), 0.1-100 parts arom. diazide photocrosslinking agent, 1-400 parts unsatd. amine, and 0.5-50 parts **sulfonamide** R3SO2NHR4, R3SO2NR42, or R3SO2NHR5NHSO2R4 (R3 = arom. or alkyl group; R4 = H, arom. group, alkyl group; R5 = alkylene, arom. ring-contg. divalent org. group), and optionally photosensitizer. A polyamic acid prepd. from 4,4'-diaminodiphenyl ether and 3,3',4,4'-biphenyltetracarboxylic acid dianhydride in N-methyl-2-pyrrolidone was treated with 2,6-bis(p-aziobenzal)-4-carboxycyclohexanone, 3-(dimethylamino)propyl methacrylate, and p-toluenesulfonylanilide, spin-coated on a Si wafer, exposed, developed with aq. N-methyl-2-pyrrolidone, rinsed with iso-PrOH, and baked at 400° for 30 min to give a polyimide film with wt. loss initiation temp. 450° and elongation 12%.

IT **84329-59-9P 91415-39-3P 162843-46-1P 162843-47-2P 162843-48-3P 162843-49-4P**

(elec. circuit structures having photosensitive heat-resistant polyimide compns. for surface protection,  $\alpha$ -ray shielding, or insulation and manuf. thereof)



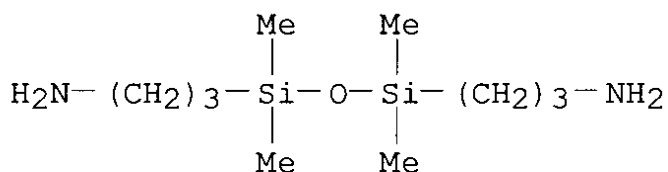
RN 84329-59-9 HCAPLUS

CN [5,5'-Biisobenzofuran]-1,1',3,3'-tetrone, polymer with  
4,4'-oxybis[benzenamine] and 3,3'-(1,1,3,3-tetramethyl-1,3-  
disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

CM 1

CRN 2469-55-8

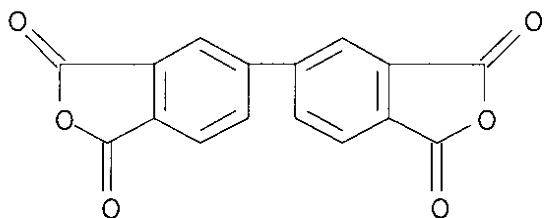
CMF C10 H28 N2 O Si2



CM 2

CRN 2420-87-3

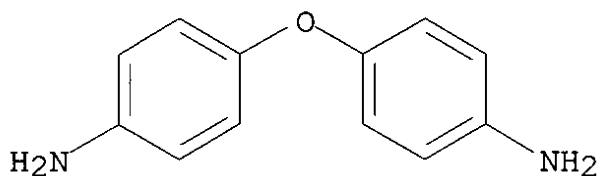
CMF C16 H6 O6



CM 3

CRN 101-80-4

CMF C12 H12 N2 O



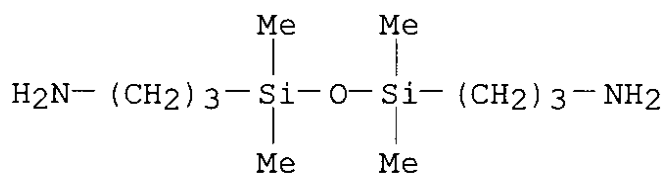
RN 91415-39-3 HCAPLUS

CN [5,5'-Biisobenzofuran]-1,1',3,3'-tetrone, polymer with  
5,5'-carbonylbis[1,3-isobenzofurandione], 4,4'-oxybis[benzenamine]  
and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine]  
(9CI) (CA INDEX NAME)

CM 1

CRN 2469-55-8

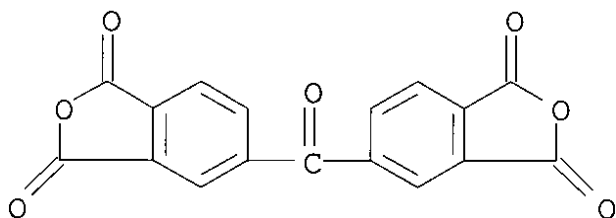
CMF C10 H28 N2 O Si2



CM 2

CRN 2421-28-5

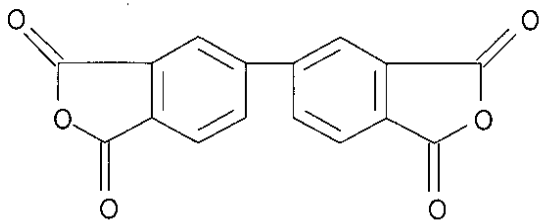
CMF C17 H6 O7



CM 3

CRN 2420-87-3

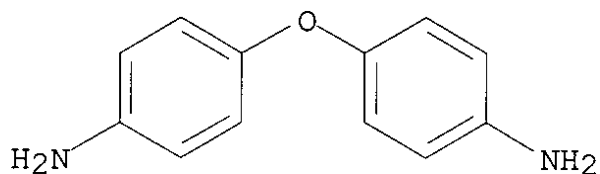
CMF C16 H6 O6



CM 4

CRN 101-80-4

CMF C12 H12 N2 O



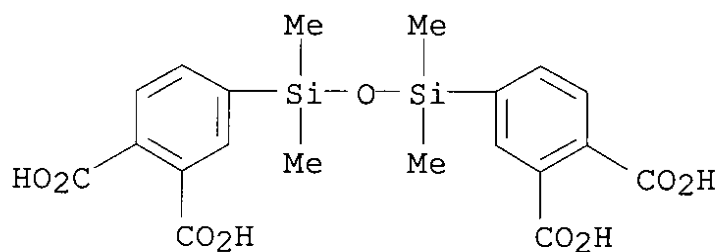
RN 162843-46-1 HCAPLUS

CN 1,2-Benzenedicarboxylic acid, 4,4'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis-, polymer with 5,5'-carbonylbis[1,3-isobenzofurandione] and 4,4'-oxybis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 42297-27-8

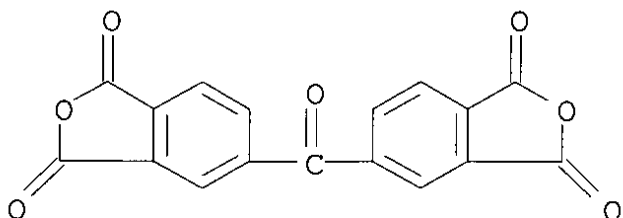
CMF C20 H22 O9 Si2



CM 2

CRN 2421-28-5

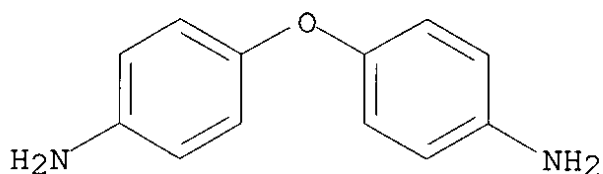
CMF C17 H6 O7



CM 3

CRN 101-80-4

CMF C12 H12 N2 O



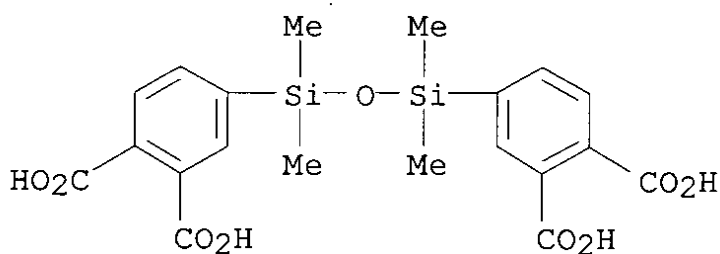
RN 162843-47-2 HCAPLUS

CN 1,2-Benzenedicarboxylic acid, 4,4'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis-, polymer with 5,5'-carbonylbis[1,3-isobenzofurandione] and 4,4'-thiobis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 42297-27-8

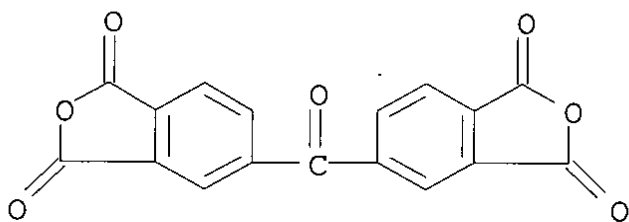
CMF C20 H22 O9 Si2



CM 2

CRN 2421-28-5

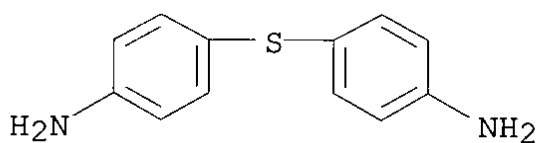
CMF C17 H6 O7



CM 3

CRN 139-65-1

CMF C12 H12 N2 S



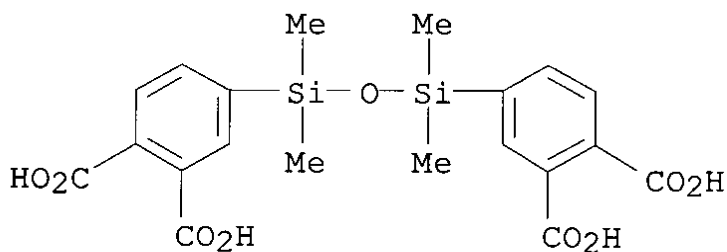
RN 162843-48-3 HCAPLUS

CN 1,2-Benzenedicarboxylic acid, 4,4'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis-, polymer with 5,5'-carbonylbis[1,3-isobenzofurandione] and 4,4'-sulfonylbis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 42297-27-8

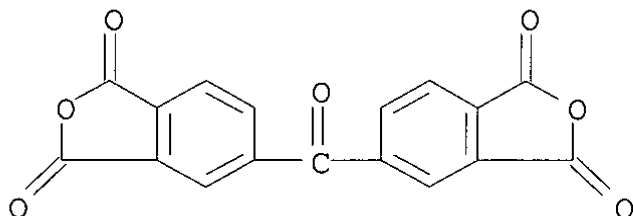
CMF C20 H22 O9 Si2



CM 2

CRN 2421-28-5

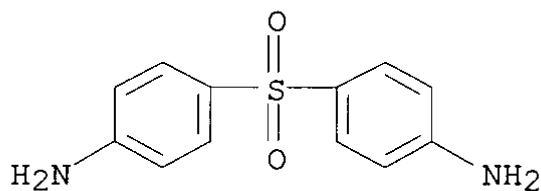
CMF C17 H6 O7



CM 3

CRN 80-08-0

CMF C12 H12 N2 O2 S



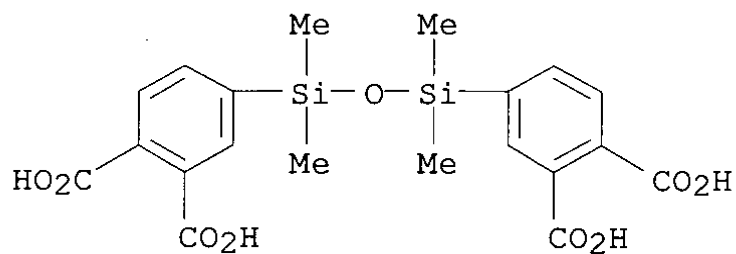
RN 162843-49-4 HCAPLUS

CN 1,2-Benzenedicarboxylic acid, 4,4'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis-, polymer with 5,5'-carbonylbis[1,3-isobenzofurandione] and 4,4'-methylenebis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 42297-27-8

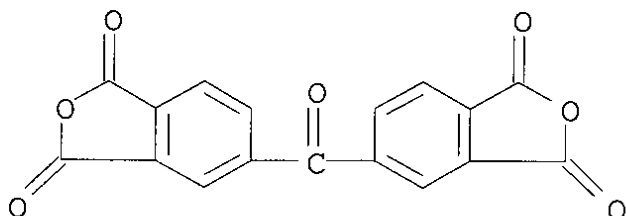
CMF C20 H22 O9 Si2



CM 2

CRN 2421-28-5

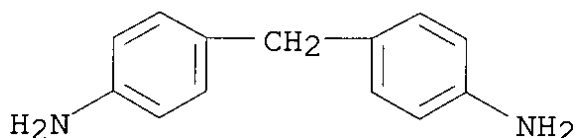
CMF C17 H6 O7



CM 3

CRN 101-77-9

CMF C13 H14 N2



IC ICM H01L021-90

ICS H01L021-312

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 74, 76

ST polyimide elec circuit structure; elec insulator polyimide heat resistant; **photoresist** polyimide heat resistant; azid photosensitizer polyimide **photoresist**

IT **Resists**

(photo-, elec. circuit structures having photosensitive heat-resistant polyimide compns. for surface protection,  $\alpha$ -ray shielding, or insulation and manuf. thereof)

IT 25085-92-1P 26298-81-7P, 3,3',4,4'-Biphenyltetracarboxylic acid dianhydride-4,4'-diaminodiphenyl ether copolymer 26615-45-2P, 3,3',4,4'-Biphenyltetracarboxylic acid dianhydride-4,4'-diaminodiphenyl ether copolymer, sru 64427-99-2P 72344-77-5P 72356-21-9P **84329-59-9P 91415-39-3P** 96926-37-3P 96926-75-9P 98847-60-0P 98866-21-8P 100630-67-9P 111898-27-2P 113735-83-4P 113742-50-0P 113742-51-1P 117247-38-8P 121509-62-4P 142007-33-8P **162843-46-1P 162843-47-2P 162843-48-3P 162843-49-4P**

162843-50-7P 162843-60-9P

(elec. circuit structures having photosensitive heat-resistant polyimide compns. for surface protection,  $\alpha$ -ray shielding, or insulation and manuf. thereof)

IT 68-34-8, p-Toluenesulfonylanilide 70-55-3, p-Toluenesulfonamide 80-39-7, N-Ethyl-p-toluenesulfonamide 90-93-7, 4,4'-Bis(diethylamino)benzophenone 98-10-2, Benzenesulfonamide 602-87-9, 5-Nitroacenaphthene 649-15-0, N,N-Diethyl-p-toluenesulfonamide 723-42-2, N,N-Dipropyl-p-toluenesulfonamide 1150-26-1 1907-65-9, N-Butyl-p-toluenesulfonamide 41595-29-3 53364-99-1 56934-07-7 63226-13-1, 3,3'-Carbonylbis(7-diethylaminocoumarin) 71868-10-5, 2-Methyl-1-[4-(methylthio)phenyl]-2-morpholinopropan-1-one 74043-79-1 115166-68-2 117964-11-1 162843-45-0 162843-58-5 162843-59-6

(elec. circuit structures having photosensitive heat-resistant polyimide compns. for surface protection,  $\alpha$ -ray shielding, or insulation and manuf. thereof)

L55 ANSWER 11 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN

1994:19271 Document No. 120:19271 Photosensitive, heat-resistant polymer compositions. Yoshikawa, Haruhiko; Kataoka, Fumio; Shoji, Fusaji; Nishikame, Masashi; Obara, Isao (Hitachi Ltd, Japan; Hitachi Chemical Co Ltd). Jpn. Kokai Tokkyo Koho JP 05080514 A2 19930402 Heisei, 12 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1991-241077 19910920.

AB The title compns. comprise (1) polymer having a repeating unit  $\text{COZ1}(\text{COOH})_2\text{CONHZ2NH}$  ( $\text{Z1} = \text{C} \geq 4$  org. group having 4 valences;  $\text{Z2} =$  divalent org. group having an arom. ring or Si) 100, (2) amine compd. having an unsatd. bond 1-400, and (3) **sulfonamide** compd. selected from  $\text{R1SO2NHR2}$ ,  $\text{R1SO2N(R2)2}$ , and  $\text{R1SO2NHZ3NHSO2R2}$  ( $\text{R1} =$  arom. group, alkyl;  $\text{R2} = \text{H}$ , arom. group, alkyl;  $\text{Z3} =$  alkylene, divalent org. group having an arom. ring) 0.5-50 wt. parts. The compns. show high developing rate, good mech. strength, and improved workability in forming insulating and protective coatings for semiconductor elements and electronics.

IT **84329-58-8 84329-59-9**  
(neg.-working photoresist from)

RN 84329-58-8 HCAPLUS

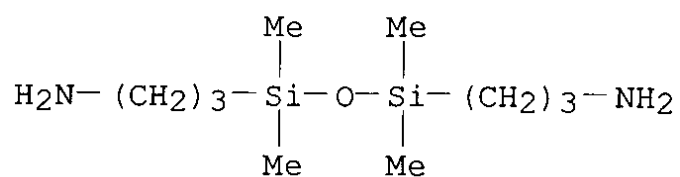
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with 5,5'-carbonylbis[1,3-isobenzofurandione], 4,4'-oxybis[benzenamine] and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

CM 1

CRN 2469-55-8



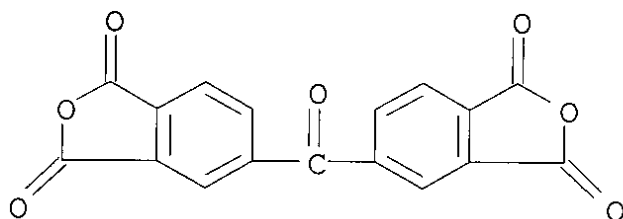
CMF C10 H28 N2 O Si2



CM 2

CRN 2421-28-5

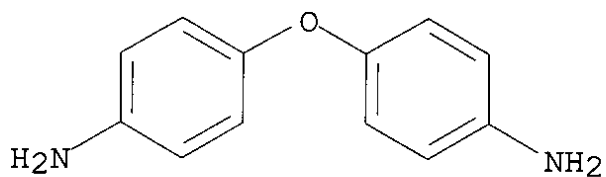
CMF C17 H6 O7



CM 3

CRN 101-80-4

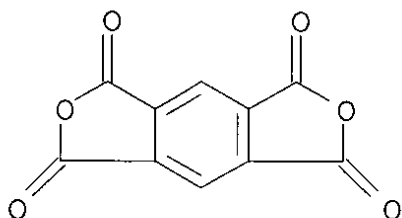
CMF C12 H12 N2 O



CM 4

CRN 89-32-7

CMF C10 H2 O6



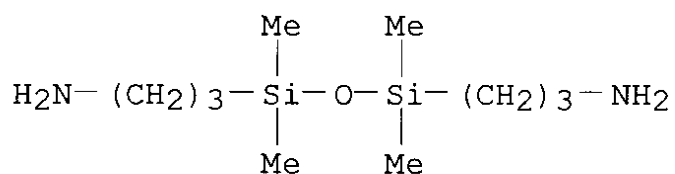
RN 84329-59-9 HCAPLUS

CN [5,5'-Biisobenzofuran]-1,1',3,3'-tetrone, polymer with  
4,4'-oxybis[benzenamine] and 3,3'-(1,1,3,3-tetramethyl-1,3-  
disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

CM 1

CRN 2469-55-8

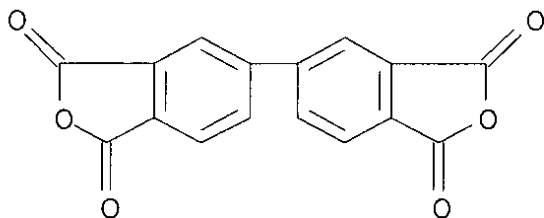
CMF C10 H28 N2 O Si2



CM 2

CRN 2420-87-3

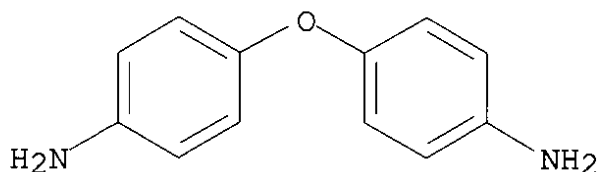
CMF C16 H6 O6



CM 3

CRN 101-80-4

CMF C12 H12 N2 O

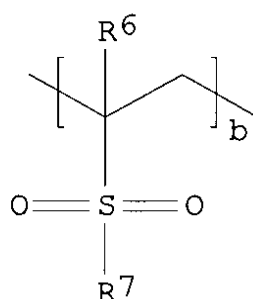
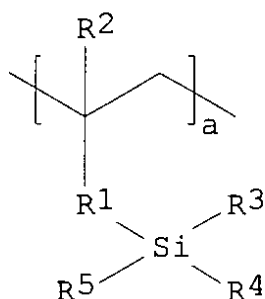


- IC ICM G03F007-038  
ICS G03F007-004; G03F007-075; H01L021-027; H01L021-312; H05K003-28
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 76
- ST **photoresist** heat resistant; polyamide **sulfonamide**  
unsatd amine **photoresist**
- IT Polyamides, uses  
(neg.-working **photoresists** from)
- IT **Resists**  
(photo-, neg.-working, contg. polyamides, unsatd. amines, and **sulfonamides**)
- IT 68-34-8, p-Toluenesulfonylanilide 70-55-3, p-**Toluenesulfonamide** 80-39-7, p-Toluenesulfonyl-N-ethylamide 98-10-2, **Benzenesulfonamide** 599-86-0 649-15-0 1129-26-6, p-Methoxybenzenesulfonamide 1899-94-1, m-**Toluenesulfonamide** 1907-65-9 69728-92-3 74043-79-1 115166-68-2 117964-11-1 151619-27-1  
(neg.-working **photoresist** contg., for rapid developability)
- IT 105-16-8, 2-(N,N-Diethylamino)ethyl methacrylate 2867-47-2, 2-(N,N-Dimethylamino)ethyl methacrylate 20602-77-1, 3-(N,N-Dimethylamino)propyl methacrylate 25085-92-1 26298-81-7, 3,3',4,4'-Biphenyltetracarboxylic acid dianhydride-4,4'-diaminodiphenyl ether copolymer 26615-45-2, 3,3',4,4'-Biphenyltetracarboxylic acid dianhydride-4,4'-diaminodiphenyl ether copolymer, sru 60283-41-2 **84329-58-8 84329-59-9** 117247-38-8  
(neg.-working **photoresist** from)

=> d 156 1-21 cbib abs hitstr hitind

L56 ANSWER 1 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN  
2004:59649 Document No. 140:136424 Silicon-containing polymer,  
**photoresist** composition and patterning process. Hatakeyama,  
Jun; Takeda, Takanobu; Ishihara, Toshinobu (Japan). U.S. Pat. Appl.  
Publ. US 2004013980 A1 20040122, 36 pp. (English). CODEN: USXXCO.  
APPLICATION: US 2003-611261 20030702. PRIORITY: JP 2002-192910  
20020702.

GI



I

AB The present invention relates to silicon-contg. polymers comprising recurring units of I (R1 = single bond, alkylene; R2 = hydrogen, alkyl; R3-5 = alkyl, haloalkyl, aryl or silicon-contg. group; R6 = hydrogen, Me, cyano or -C(=O)OR8; R8 = hydrogen, alkyl, acid labile group; R7 = alkyl, -NR9R10, -OR11; R9-11 = hydrogen or alkyl; a, b = pos. nos. satisfying  $0 < a+b \leq 1$ ). **Resist** compns. comprising the polymers are sensitive to high-energy radiation and have a high sensitivity and resolu. at a wavelength of less than 300 nm and improved resistance to oxygen plasma etching.

IT **648895-21-0P**

(silicon-contg. polymer, **resist** compn. for patterning process)

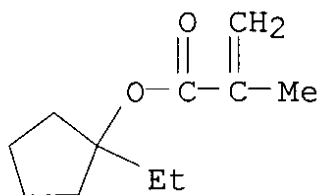
RN 648895-21-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-ethylcyclopentyl ester, polymer with N,N-dimethylethanesulfonamide and ethenyltrimethylsilane (9CI) (CA INDEX NAME)

CM 1

CRN 266308-58-1

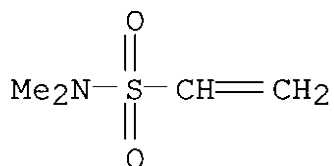
CMF C11 H18 O2



CM 2

CRN 7700-07-4

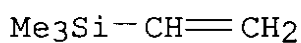
CMF C4 H9 N O2 S



CM 3

CRN 754-05-2

CMF C5 H12 Si



IC ICM H01B001-00

ICS C08J003-00

NCL 430311000; 252500000; 524262000

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38

ST silicon polymer **photoresist** compn patterning process

IT Photolithography

**Photoresists**(silicon-contg. polymer, **resist** compn. and patterning process)

IT	648895-18-5P	648895-19-6P	648895-20-9P	<b>648895-21-0P</b>
	648895-22-1P	648895-23-2P	648895-24-3P	648895-25-4P
	648895-26-5P	648895-27-6P	648895-28-7P	648895-29-8P
	648895-30-1P	648895-31-2P	648895-33-4P	

(silicon-contg. polymer, **resist** compn. for patterning process)

L56 ANSWER 2 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN  
2003:435346 Document No. 139:23298 Urethane-based stain-release coatings, compositions, and imparting stain release to a substrate. Fan, Wayne W.; Martin, Steven J.; Qiu, Zai-ming; Terrazas, Michael S.; Cote, Linda G.; Johnson, Mitchell T.; Lien, Larry A. (3M Innovative Properties Co., USA). U.S. Pat. Appl. Publ. US 2003105263 A1 20030605, 39 pp., Cont.-in-part of U.S. Ser. No. 804,447, abandoned. (English). CODEN: USXXCO. APPLICATION: US 2002-106616 20020326. PRIORITY: US 2000-PV226049 20000816; US 2001-804447 20010312.

AB The chem. compns. comprise  $\geq 1$  urethane oligomers of  $\geq 2$  repeating units selected from F-contg. urethane oligomers and long-chain hydrocarbon-contg. urethane oligomers. These urethane oligomers comprise the reaction product of (a)  $\geq 1$  polyfunctional isocyanate compds., (b)  $\geq 1$  polyols, (c)  $\geq 1$  monoalcs. selected from fluorochem. monoalcs., optionally substituted, long-chain hydrocarbon monoalcs., and mixts., (d)  $\geq 1$  silanes, and optionally (e)  $\geq 1$  water-solubilizing compds. comprising  $\geq 1$  water-solubilizing groups and  $\geq 1$  isocyanate-reactive H-contg. group. The chem. compns. can be applied as coatings and these coatings can impart stain-release characteristics and **resist** being worn-off due to wear and abrasion.

IT **400781-91-1DP**, reaction products with fluoroalc. or hydrocarbon alc. **400782-02-7DP**, reaction products with fluoroalc. or hydrocarbon alc. **400782-21-0DP**, reaction products with fluoroalc. or hydrocarbon alc. **400782-22-1DP**, reaction products with fluoroalc. or hydrocarbon alc. **400782-23-2DP**, reaction products with fluoroalc. or hydrocarbon alc. **400782-24-3DP**, reaction products with fluoroalc. or hydrocarbon alc. **400782-25-4DP**, reaction products with fluoroalc. or hydrocarbon alc. **400782-27-6DP**, reaction products with fluoroalc. or hydrocarbon alc. **400782-32-3DP**, reaction products with fluoroalc. or hydrocarbon alc.

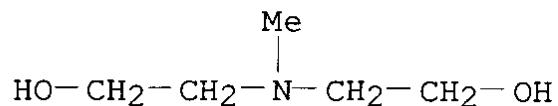
(fluorine-contg. urethane-based stain-release coatings on various surfaces)

RN 400781-91-1 HCAPLUS

CN Acetic acid, hydroxy-, polymer with N,N-bis(2-hydroxyethyl)-1-butanefulfonamide, Desmodur N 3300 and 3-(triethoxysilyl)-1-propanamine, compd. with 2,2'-(methylimino)bis[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 105-59-9  
 CMF C5 H13 N O2

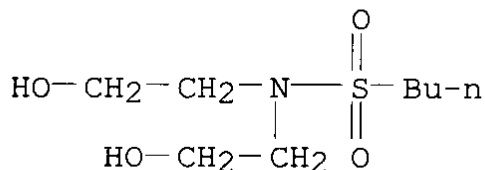


CM 2

CRN 400781-90-0  
 CMF (C9 H23 N O3 Si . C8 H19 N O4 S . C2 H4 O3 . Unspecified)x  
 CCI PMS

CM 3

CRN 400781-89-7  
 CMF C8 H19 N O4 S



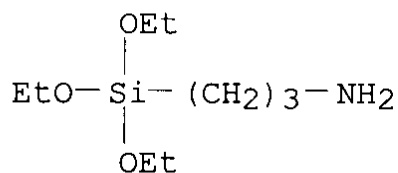
CM 4

CRN 104559-01-5  
 CMF Unspecified  
 CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 5

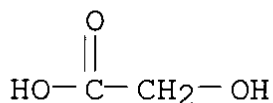
CRN 919-30-2  
 CMF C9 H23 N O3 Si



CM 6

CRN 79-14-1

CMF C2 H4 O3



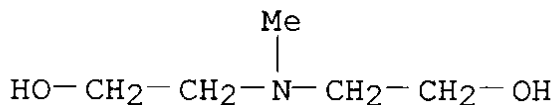
RN 400782-02-7 HCAPLUS

CN 1,2,3-Propanetricarboxylic acid, 2-hydroxy-, polymer with  
 N,N-bis(2-hydroxyethyl)-1-butanesulfonamide, Desmodur N 3300 and  
 3-(triethoxysilyl)-1-propanamine, compd. with 2,2'-  
 (methylimino)bis[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 105-59-9

CMF C5 H13 N O2



CM 2

CRN 400782-01-6

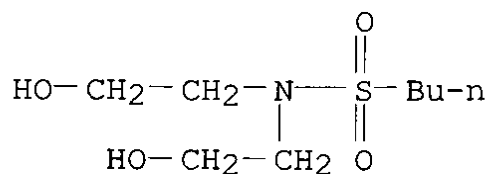
CMF (C9 H23 N O3 Si . C8 H19 N O4 S . C6 H8 O7 . Unspecified)x  
 CCI PMS

CM 3

CRN 400781-89-7

CMF C8 H19 N O4 S





CM 4

CRN 104559-01-5

CMF Unspecified

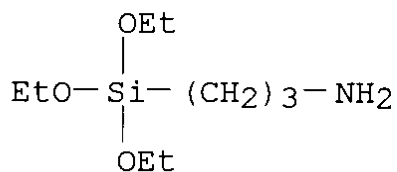
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 5

CRN 919-30-2

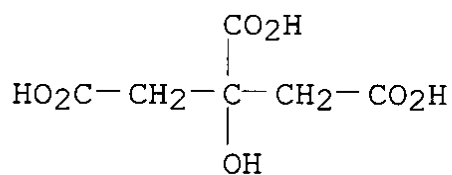
CMF C9 H23 N O3 Si



CM 6

CRN 77-92-9

CMF C6 H8 O7



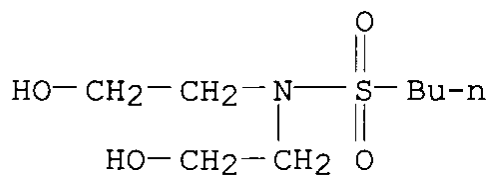
RN 400782-21-0 HCAPLUS

CN 1-Butanesulfonamide, N,N-bis(2-hydroxyethyl)-, polymer with Desmodur  
 N 3300 and 3-(trimethoxysilyl)-1-propanamine (9CI) (CA INDEX NAME)

CM 1

CRN 400781-89-7

CMF C8 H19 N O4 S



CM 2

CRN 104559-01-5

CMF Unspecified

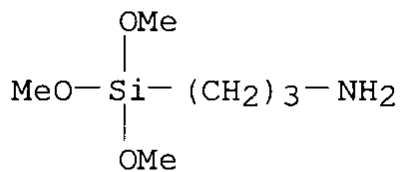
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 3

CRN 13822-56-5

CMF C6 H17 N O3 Si



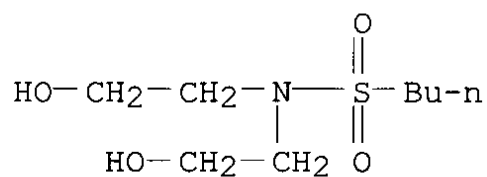
RN 400782-22-1 HCAPLUS

CN Silicic acid (H<sub>4</sub>SiO<sub>4</sub>), tetraethyl ester, polymer with  
 N,N-bis(2-hydroxyethyl)-1-butanesulfonamide, Desmodur N 3300 and  
 3-(trimethoxysilyl)-1-propanamine (9CI) (CA INDEX NAME)

CM 1

CRN 400781-89-7

CMF C8 H19 N O4 S



CM 2

CRN 104559-01-5

CMF Unspecified

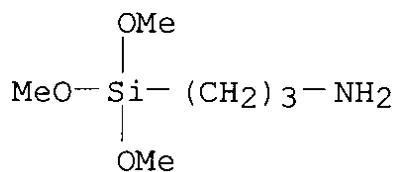
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 3

CRN 13822-56-5

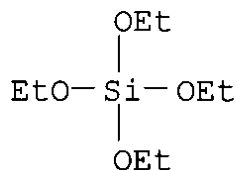
CMF C6 H17 N O3 Si



CM 4

CRN 78-10-4

CMF C8 H20 O4 Si



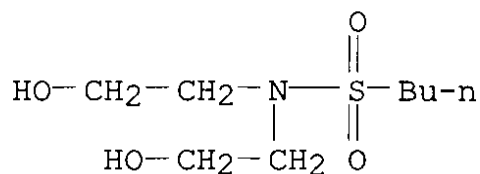
RN 400782-23-2 HCAPLUS

CN 1-Butanesulfonamide, N,N-bis(2-hydroxyethyl)-, polymer with Desmodur  
 N 3300 and 3-(trimethoxysilyl)-1-propanethiol (9CI) (CA INDEX NAME)

CM 1

CRN 400781-89-7

CMF C8 H19 N O4 S



CM 2

CRN 104559-01-5

CMF Unspecified

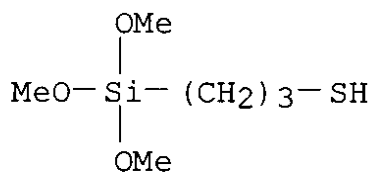
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 3

CRN 4420-74-0

CMF C6 H16 O3 S Si



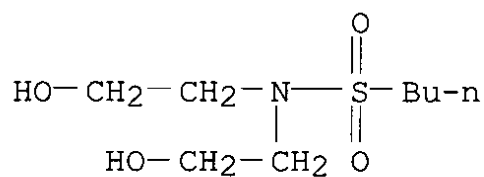
RN 400782-24-3 HCAPLUS

 CN 1-Butanesulfonamide, N,N-bis(2-hydroxyethyl)-, polymer with Desmodur  
 N 100 and 3-(trimethoxysilyl)-1-propanamine (9CI) (CA INDEX NAME)

CM 1

CRN 400781-89-7

CMF C8 H19 N O4 S



CM 2

CRN 53200-31-0

CMF Unspecified

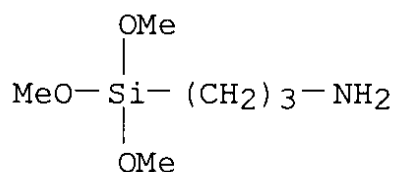
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 3

CRN 13822-56-5

CMF C6 H17 N O3 Si



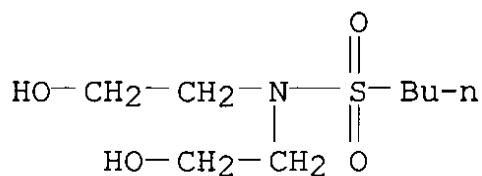
RN 400782-25-4 HCAPLUS

CN 1-Butanesulfonamide, N,N-bis(2-hydroxyethyl)-, polymer with Desmodur  
H and 3-(trimethoxysilyl)-1-propanamine (9CI) (CA INDEX NAME)

CM 1

CRN 400781-89-7

CMF C8 H19 N O4 S



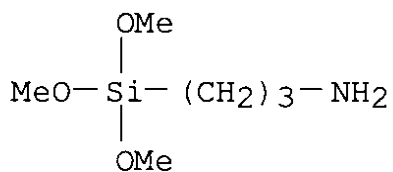
CM 2

CRN 52276-54-7  
 CMF Unspecified  
 CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 3

CRN 13822-56-5  
 CMF C6 H17 N O3 Si

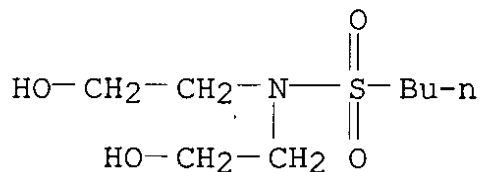


RN 400782-27-6 HCAPLUS

CN 1-Butanesulfonamide, N,N-bis(2-hydroxyethyl)-, polymer with  
 1,6-diisocyanatohexane and 3-(trimethoxysilyl)-1-propanamine (9CI)  
 (CA INDEX NAME)

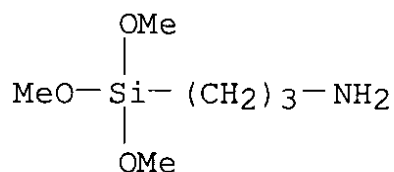
CM 1

CRN 400781-89-7  
 CMF C8 H19 N O4 S



CM 2

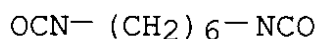
CRN 13822-56-5  
 CMF C6 H17 N O3 Si



CM 3

CRN 822-06-0

CMF C8 H12 N2 O2



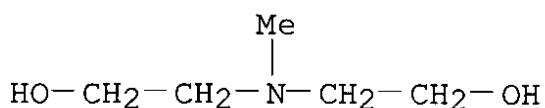
RN 400782-32-3 HCAPLUS

CN Glycine, N,N-bis(2-hydroxyethyl)-, polymer with N,N-bis(2-hydroxyethyl)-1-butanesulfonamide, Desmodur N 3300, hydroxyacetic acid and 3-(trimethoxysilyl)-1-propanamine, compd. with 2,2'-(methylimino)bis[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 105-59-9

CMF C5 H13 N O2



CM 2

CRN 400782-31-2

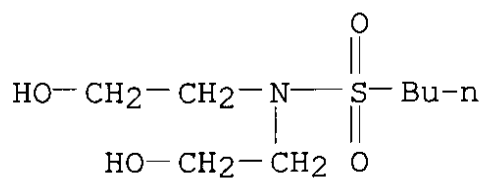
CMF (C8 H19 N O4 S . C6 H17 N O3 Si . C6 H13 N O4 . C2 H4 O3 . Unspecified)x

CCI PMS

CM 3

CRN 400781-89-7

CMF C8 H19 N O4 S



CM 4

CRN 104559-01-5

CMF Unspecified

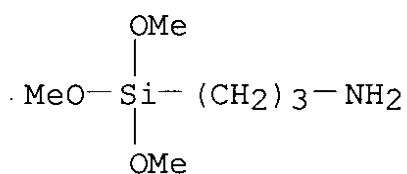
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 5

CRN 13822-56-5

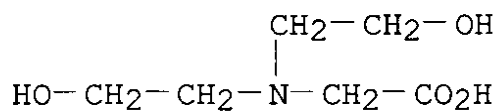
CMF C6 H17 N O3 Si



CM 6

CRN 150-25-4

CMF C6 H13 N O4

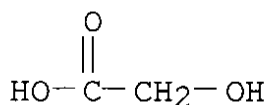


CM 7

CRN 79-14-1

CMF C2 H4 O3





IC ICM C08G077-22  
 NCL 528030000; 528044000  
 CC 42-10 (Coatings, Inks, and Related Products)  
 IT 111-87-5DP, 1-Octanol, reaction products with urethane-silane condensate salt 112-30-1DP, 1-Decanol, reaction products with urethane-silane condensate salt 112-53-8DP, 1-Dodecanol, reaction products with urethane-silane condensate salt 112-72-1DP, 1-Tetradecanol, reaction products with urethane-silane condensate salt 112-92-5DP, 1-Octadecanol, reaction products with urethane-silane condensate salt 307-30-2DP, reaction products with urethane-silane condensate salt 375-01-9DP, 2,2,3,3,4,4,4-Heptafluorobutanol, reaction products with urethane-silane condensate salt 377-66-2DP, reaction products with urethane-silane condensate salt 647-42-7DP, reaction products with urethane-silane condensate salt 24448-09-7DP, reaction products with urethane-silane condensate salt 28788-68-3DP, Perfluorocyclohexylmethanol, reaction products with urethane-silane condensate salt 36653-82-4DP, 1-Hexadecanol, reaction products with urethane-silane condensate salt 400781-88-6DP, reaction products with fluoroalc. or hydrocarbon alc. 400781-88-6DP, reaction products with urethane-silane condensate salt **400781-91-1DP**, reaction products with fluoroalc. or hydrocarbon alc. 400781-93-3DP, reaction products with fluoroalc. or hydrocarbon alc. 400781-95-5DP, reaction products with fluoroalc. or hydrocarbon alc. 400781-97-7DP, reaction products with fluoroalc. or hydrocarbon alc. 400781-98-8DP, reaction products with urethane-silane condensate salt 400781-99-9DP, reaction products with urethane-silane condensate salt 400782-00-5DP, reaction products with urethane-silane condensate salt **400782-02-7DP**, reaction products with fluoroalc. or hydrocarbon alc. 400782-04-9DP, reaction products with fluoroalc. or hydrocarbon alc. 400782-06-1DP, reaction products with fluoroalc. or hydrocarbon alc. 400782-08-3DP, reaction products with fluoroalc. or hydrocarbon alc. 400782-10-7DP, reaction products with fluoroalc. or hydrocarbon alc. 400782-12-9DP, reaction products with fluoroalc. or hydrocarbon alc. 400782-14-1DP, reaction products with fluoroalc. or hydrocarbon alc. 400782-16-3DP, reaction products with fluoroalc. or hydrocarbon alc. 400782-18-5DP, reaction products with fluoroalc. or hydrocarbon alc. 400782-20-9DP, reaction products with fluoroalc. or hydrocarbon alc. **400782-21-0DP**, reaction products with fluoroalc. or hydrocarbon alc. **400782-22-1DP**, reaction products with

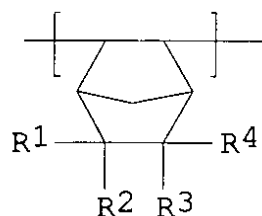
fluoroalc. or hydrocarbon alc. **400782-23-2DP**, reaction products with fluoroalc. or hydrocarbon alc. **400782-24-3DP**, reaction products with fluoroalc. or hydrocarbon alc. **400782-25-4DP**, reaction products with fluoroalc. or hydrocarbon alc. **400782-26-5DP**, reaction products with fluoroalc. or hydrocarbon alc. **400782-27-6DP**, reaction products with fluoroalc. or hydrocarbon alc. **400782-32-3DP**, reaction products with fluoroalc. or hydrocarbon alc. **400782-34-5DP**, reaction products with fluoroalc. or hydrocarbon alc. **537021-96-8DP**, 3-Aminopropyltriethoxysilane-Desmodur N 3300-polyethylene glycol copolymer, reaction products with fluoroalc. or hydrocarbon alc.

(fluorine-contg. urethane-based stain-release coatings on various surfaces)

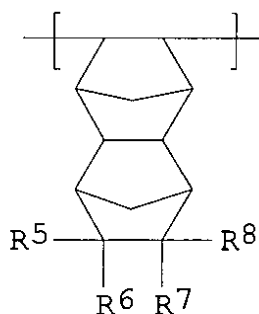
L56 ANSWER 3 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN

2003:414382 Document No. 139:14957 Positive-working photosensitive resin composition containing sulfonic acid generator with fluorine group. Sato, Kenichiro; Kodama, Kunihiro (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2003156846 A2 20030530, 47 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-354581 20011120.

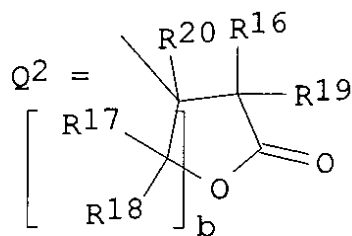
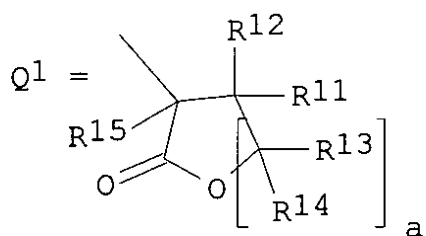
GI



I



II



- AB The photosensitive resin compn. contains (A) a compd. generating an acid by the action of actinic ray or radiation, and (B) a resin, whose soly. to alk. developer increases by the action of the acid, contg.  $\geq 1$  repeating unit selected from I and II [R1-8 = H, alkyl, cyclic hydrocarbon, halo, cyano, CO<sub>2</sub>H, group decomposable by the action of an acid, COXAR9; X = divalent group selected from O, S, NH, NHSO<sub>2</sub>, NHSO<sub>2</sub>NH; A = bond or divalent group having  $\geq 1$  group selected from alkylene, ether, thioether, carbonyl, ester, amide, **sulfonamide**, urethane, and urea; R<sub>9</sub> = alkyl, cyclic hydrocarbon, alkoxy, CO<sub>2</sub>H, CO<sub>2</sub>R<sub>10</sub>, Q<sub>1</sub>, Q<sub>2</sub>, CN, OH, CONH<sub>10</sub>, CONHSO<sub>2</sub>R<sub>10</sub>; R<sub>10</sub> = alkyl, cyclic alkyl; R<sub>10</sub>' = alkyl, cyclic alkyl, Q<sub>1</sub>-2; R<sub>11</sub>-20 = H, (un)substituted alkyl; a, b = 1-2]. The compn. is useful for microphoto fabrication using ArF excimer laser.
- IC ICM G03F007-039  
ICS C08F232-00; G03F007-004; H01L021-027
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38
- ST pos **photoresist** fluorine sulfonic acid generator; alkali soluble polymer cyclic hydrocarbon group
- IT **Polysiloxanes**, uses  
(KP 341; pos.-working **photoresist** compn. contg. sulfonic acid generator with F group and alkali-sol. polymer)
- IT Surfactants  
(fluorosurfactants; pos.-working **photoresist** compn. contg. sulfonic acid generator with F group and alkali-sol. polymer)
- IT Positive **photoresists**  
(pos.-working **photoresist** compn. contg. sulfonic acid generator with F group and alkali-sol. polymer)
- IT 122752-67-4, tert-Butyl cholate 157692-53-0, tert-Butyl deoxycholate 169965-90-6, tert-Butyl lithocholate  
(dissoln. inhibitor; pos.-working **photoresist** compn. contg. sulfonic acid generator with F group and alkali-sol. polymer)
- IT 153698-46-5P, Triphenylsulfonium pentafluorobenzenesulfonate  
171292-12-9P 258341-98-9P 270563-93-4P 270563-96-7P  
301153-77-5P 301664-71-1P 301664-72-2P 347193-29-7P  
398141-19-0P 532982-83-5P 532982-85-7P 532982-87-9P  
532982-88-0P 532982-91-5P 532982-92-6P 532982-93-7P  
(pos.-working **photoresist** compn. contg. sulfonic acid generator with F group and alkali-sol. polymer)
- IT 60-80-0, Antipyrine 1116-76-3, Trioctylamine 3001-72-7, 1,5-Diazabicyclo[4.3.0]-5-nonene 9016-45-9, Polyoxyethylene nonylphenyl ether 24544-04-5, 2,6-Diisopropylaniline 36631-19-3, Triphenylimidazole 41556-26-7, Bis(1,2,2,6,6-pentamethyl-4-

piperidyl) sebacate 137462-24-9, Megafac F 176 216679-67-3,  
Megafac R 08

(pos.-working **photoresist** compn. contg. sulfonic acid  
generator with F group and alkali-sol. polymer)

IT 270563-92-3 270563-98-9 389859-75-0 389859-76-1 474510-73-1  
477327-98-3 508182-57-8 532982-95-9

(pos.-working **photoresist** compn. contg. sulfonic acid  
generator with F group and alkali-sol. polymer)

L56 ANSWER 4 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN

2003:173549 Document No. 138:225461 Aqueous fluorochemical polymer  
composition for water and oil repellent treatment of masonry and  
well bores. Fan, Wayne W.; Martin, Steven J. (3M Innovative  
Properties Company, USA). PCT Int. Appl. WO 2003018508 A1 20030306,  
28 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA,  
BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM,  
DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,  
IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,  
MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD,  
SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU,  
ZA, ZM, ZW, AM, AZ, BY, KG, KZ; RW: AT, BE, BF, BJ, CF, CG, CH,  
CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML,  
MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2.  
APPLICATION: WO 2002-US15937 20020516. PRIORITY: US 2001-938188  
20010823.

AB The present invention provides a water-sol. and shelf-stable aq.  
fluorochem. polymeric treatment useful to treat porous substrates to  
render them repellent to water- and oil-based stains. The treatment  
comprises a water-sol. or dispersible fluorochem. polymer of  
formula:  $-[CR(COXR_1R_f)CH_2]_a[CR(CO(OR_2CO)mO-M^+)CH_2]_b[CR(COXR_3Si(OR_4)_3)CH_2]_c[CRYCH_2]_d-$ , in which  $R_f = C_3-6$   
fluoroalkyl;  $R_1 =$  hydrocarbyl;  $X = O, N,$  or  $S$ ;  $R_2 =$  short-chain  
alkylene;  $m = 0$  or  $1$ ;  $M^+ = H$  or mono- or multivalent cation;  $R_3 =$   
hydrocarbyl;  $R_4 = H, Me, Et,$  or  $Bu$ ;  $Y =$  a non-hydrophilic group;  $a,$   
 $b,$  and  $c$  are  $\geq 1$ ,  $d \geq 0$ , and contg. only carbon atoms in  
the backbone, with a plurality of each of the following groups  
pendent from the backbone: (a) fluoroaliph. groups, (b)  
carboxyl-contg. groups, (c) silyl groups and optionally (d) other  
non-hydrophilic groups. Because the water-sol. polymeric treatment  
of the present invention, and the shelf-stable aq. solns. thereof,  
can be applied to porous substrates in aq. soln., they eliminate the  
need for environmentally harmful and toxic co-solvents.  
Particularly when applied to masonry and other siliceous materials,  
these polymeric treatments can react with the substrate onto which  
they are applied to form an invisible and water-insol. coating that  
repels both water and oil, **resists** soiling, and that  
cannot be easily washed from the surface of the substrate.  
Substrates treated with these polymers are thereby durably protected  
from rain and normal weathering.

IT 500569-53-9P 500569-54-0P 500569-55-1P  
 500569-56-2P 500569-57-3P 500569-58-4P  
 500569-59-5P 500569-60-8P 500569-61-9P  
 500569-62-0P 500569-63-1P 500569-64-2P  
 500569-65-3P 500569-66-4P 500569-67-5P  
 (aq. treating compn.; aq. fluorochem. polymer compn. for water  
 and oil repellent treatment of masonry and well bores and porous  
 materials)

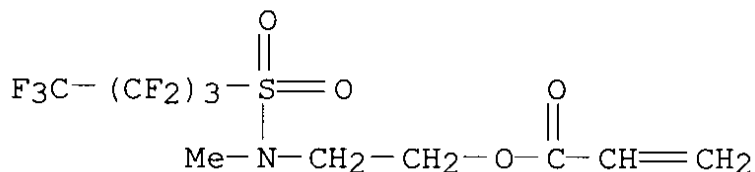
RN 500569-53-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester,  
 polymer with 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl  
 2-propenoate and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 67584-55-8

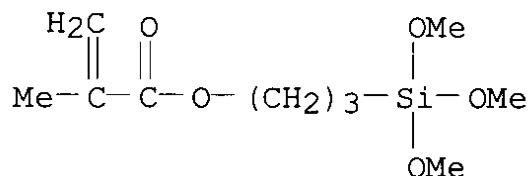
CMF C10 H10 F9 N O4 S



CM 2

CRN 2530-85-0

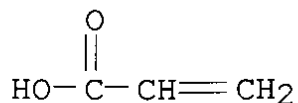
CMF C10 H20 O5 Si



CM 3

CRN 79-10-7

CMF C3 H4 O2



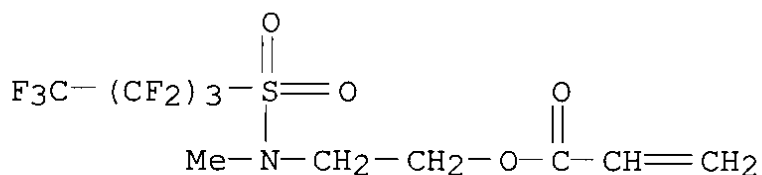
RN 500569-54-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 67584-55-8

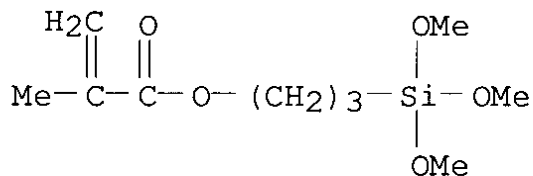
CMF C10 H10 F9 N 04 S



CM 2

CRN 2530-85-0

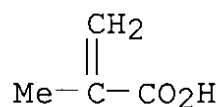
CMF C10 H20 O5 Si



CM 3

CRN 79-41-4

CMF C4 H6 O2



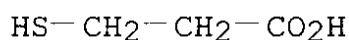
RN 500569-55-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, telomer with 3-mercaptopropanoic acid, 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 107-96-0

CMF C3 H6 O2 S



CM 2

CRN 500569-53-9

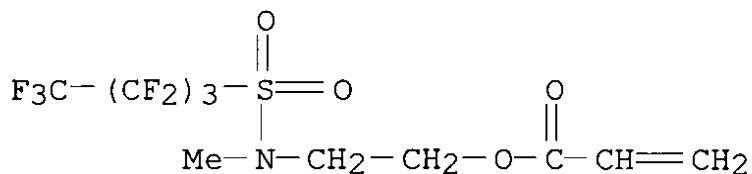
CMF (C10 H20 O5 Si . C10 H10 F9 N O4 S . C3 H4 O2)x

CCI PMS

CM 3

CRN 67584-55-8

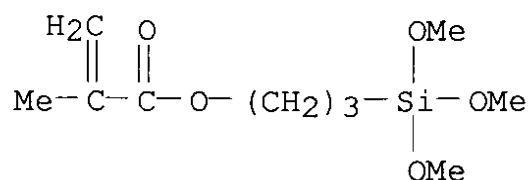
CMF C10 H10 F9 N O4 S



CM 4

CRN 2530-85-0

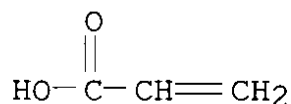
CMF C10 H20 O5 Si



CM 5

CRN 79-10-7

CMF C3 H4 O2



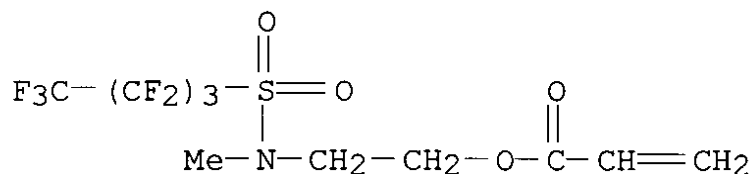
RN 500569-56-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with butyl 2-propenoate, 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 67584-55-8

CMF C10 H10 F9 N O4 S

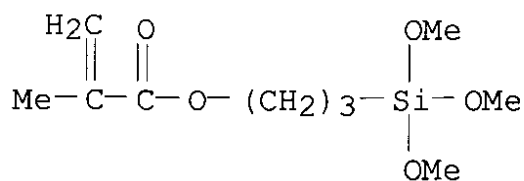


CM 2

CRN 2530-85-0

CMF C10 H20 O5 Si

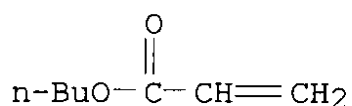




CM 3

CRN 141-32-2

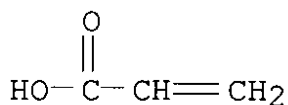
CMF C7 H12 O2



CM 4

CRN 79-10-7

CMF C3 H4 O2



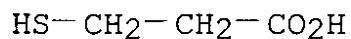
RN 500569-57-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester,  
telomer with butyl 2-propenoate, 3-mercaptopropanoic acid,  
2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate and  
2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 107-96-0

CMF C3 H6 O2 S



CM 2

CRN 500569-56-2

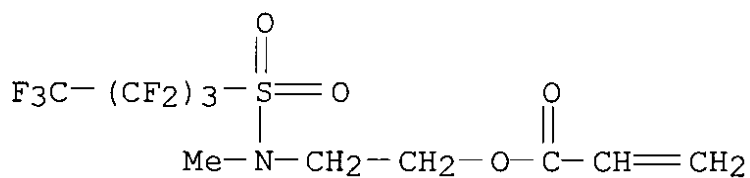
CMF (C10 H20 O5 Si . C10 H10 F9 N O4 S . C7 H12 O2 . C3 H4 O2)x

CCI PMS

CM 3

CRN 67584-55-8

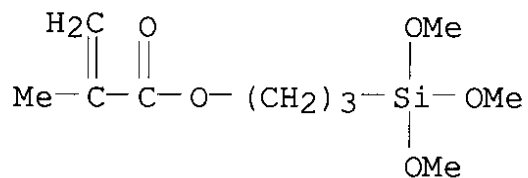
CMF C10 H10 F9 N O4 S



CM 4

CRN 2530-85-0

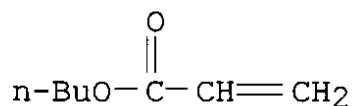
CMF C10 H20 O5 Si



CM 5

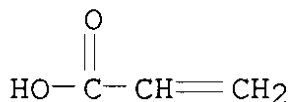
CRN 141-32-2

CMF C7 H12 O2



CM 6

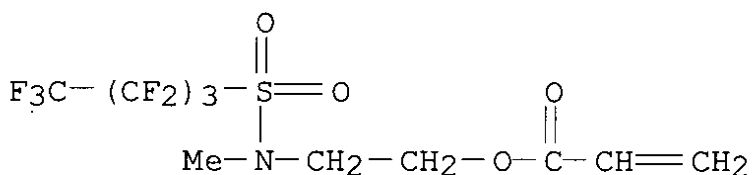
CRN 79-10-7  
CMF C3 H4 O2



RN 500569-58-4 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, polymer with butyl 2-propenoate, 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate and 3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

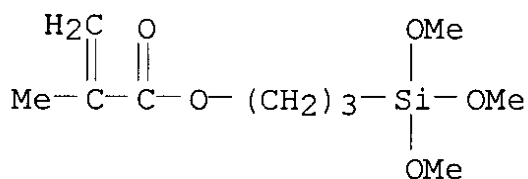
CM 1

CRN 67584-55-8  
CMF C10 H10 F9 N O4 S



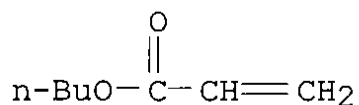
CM 2

CRN 2530-85-0  
CMF C10 H20 O5 Si



CM 3

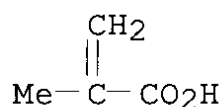
CRN 141-32-2  
CMF C7 H12 O2



CM 4

CRN 79-41-4

CMF C4 H6 O2



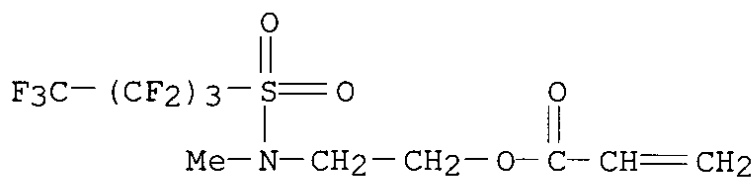
RN 500569-59-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester,  
polymer with dodecyl 2-propenoate, 2-[methyl[(nonafluorobutyl)sulfon  
yl]amino]ethyl 2-propenoate and 2-propenoic acid (9CI) (CA INDEX  
NAME)

CM 1

CRN 67584-55-8

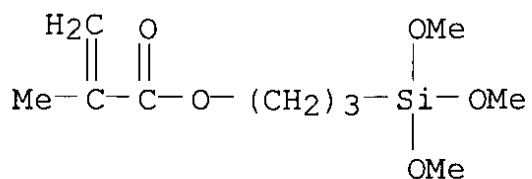
CMF C10 H10 F9 N O4 S



CM 2

CRN 2530-85-0

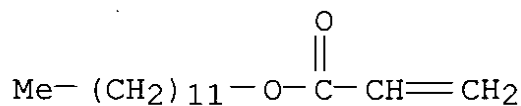
CMF C10 H20 O5 Si



CM 3

CRN 2156-97-0

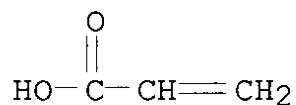
CMF C15 H28 O2



CM 4

CRN 79-10-7

CMF C3 H4 O2



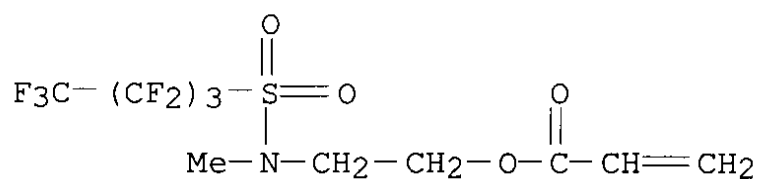
RN 500569-60-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester,  
polymer with 3-hydroxypropyl 2-propenoate, 2-  
[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate and  
2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 67584-55-8

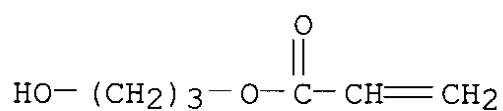
CMF C10 H10 F9 N O4 S



CM 2

CRN 2761-08-2

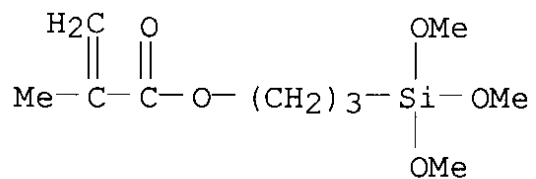
CMF C6 H10 O3



CM 3

CRN 2530-85-0

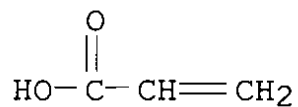
CMF C10 H20 O5 Si



CM 4

CRN 79-10-7

CMF C3 H4 O2



RN 500569-61-9 HCAPLUS

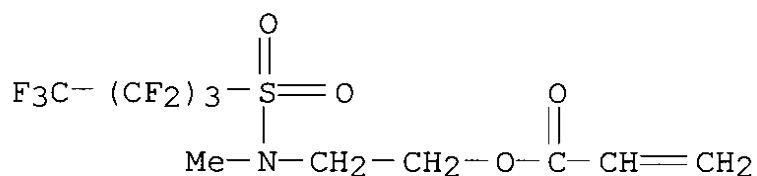
CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester,

polymer with butyl 2-propenoate, 3-hydroxypropyl 2-propenoate, 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 67584-55-8

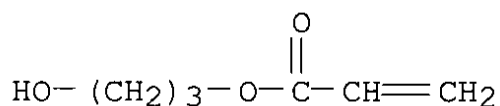
CMF C10 H10 F9 N O4 S



CM 2

CRN 2761-08-2

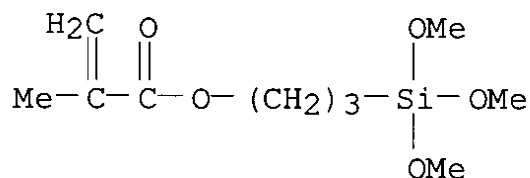
CMF C6 H10 O3



CM 3

CRN 2530-85-0

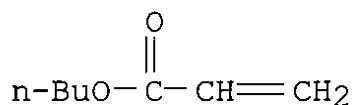
CMF C10 H20 O5 Si



CM 4

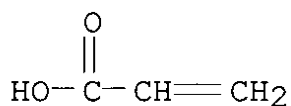
CRN 141-32-2

CMF C7 H12 O2



CM 5

CRN 79-10-7  
CMF C3 H4 O2

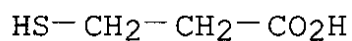


RN 500569-62-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, telomer with 3-mercaptopropanoic acid,  
2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate and  
3-(trimethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX  
NAME)

CM 1

CRN 107-96-0  
CMF C3 H6 O2 S



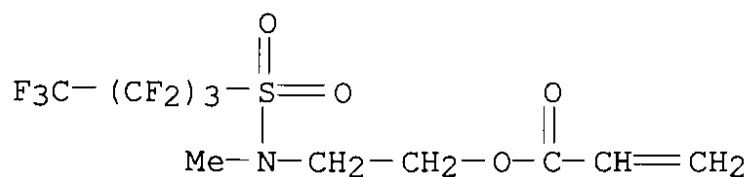
CM 2

CRN 500569-54-0  
CMF (C10 H20 O5 Si . C10 H10 F9 N O4 S . C4 H6 O2)x  
CCI PMS

CM 3

CRN 67584-55-8  
CMF C10 H10 F9 N O4 S

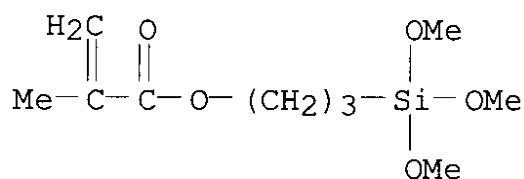




CM 4

CRN 2530-85-0

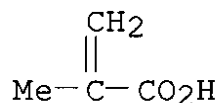
CMF C10 H20 O5 Si



CM 5

CRN 79-41-4

CMF C4 H6 O2



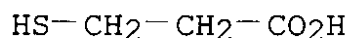
RN 500569-63-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, telomer with butyl 2-propenoate,  
3-mercaptopropanoic acid, 2-[methyl[(nonafluorobutyl)sulfonyl]amino]  
ethyl 2-propenoate and 3-(trimethoxysilyl)propyl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 107-96-0

CMF C3 H6 O2 S



CM 2

CRN 500569-58-4

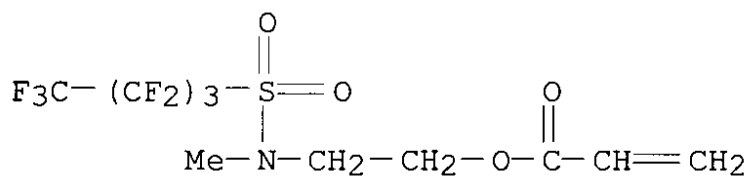
CMF (C10 H20 O5 Si . C10 H10 F9 N O4 S . C7 H12 O2 . C4 H6 O2)x

CCI PMS

CM 3

CRN 67584-55-8

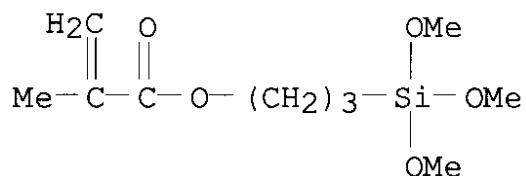
CMF C10 H10 F9 N O4 S



CM 4

CRN 2530-85-0

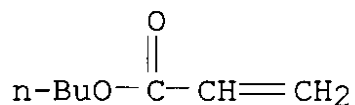
CMF C10 H20 O5 Si



CM 5

CRN 141-32-2

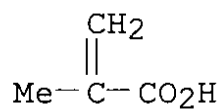
CMF C7 H12 O2



CM 6

CRN 79-41-4

CMF C4 H6 O2



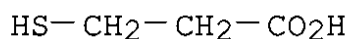
RN 500569-64-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, telomer with dodecyl 2-propenoate, 3-mercaptopropanoic acid, 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 107-96-0

CMF C3 H6 O2 S



CM 2

CRN 500569-59-5

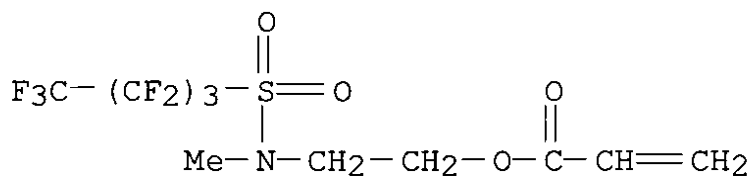
CMF (C15 H28 O2 . C10 H20 O5 Si . C10 H10 F9 N O4 S . C3 H4 O2)x

CCI PMS

CM 3

CRN 67584-55-8

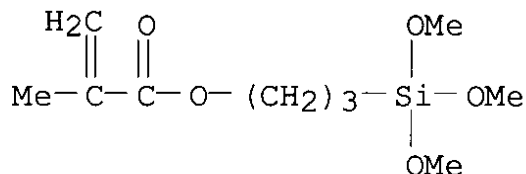
CMF C10 H10 F9 N O4 S



CM 4

CRN 2530-85-0

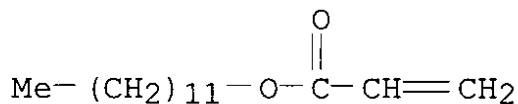
CMF C10 H20 O5 Si



CM 5

CRN 2156-97-0

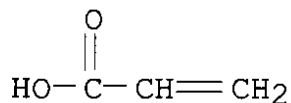
CMF C15 H28 O2



CM 6

CRN 79-10-7

CMF C3 H4 O2



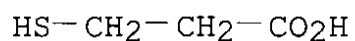
RN 500569-65-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester,  
telomer with 3-hydroxypropyl 2-propenoate, 3-mercaptopropanoic acid,  
2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate and  
2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 107-96-0

CMF C3 H6 O2 S



CM 2

CRN 500569-60-8

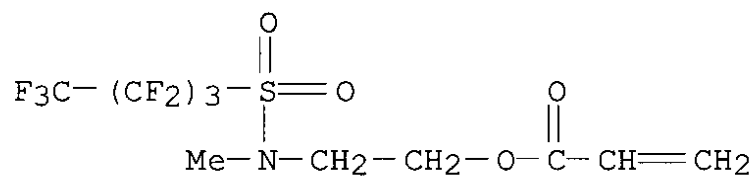
CMF (C10 H20 O5 Si . C10 H10 F9 N O4 S . C6 H10 O3 . C3 H4 O2)x

CCI PMS

CM 3

CRN 67584-55-8

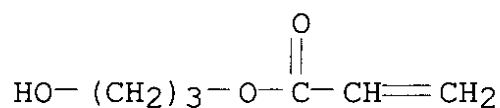
CMF C10 H10 F9 N O4 S



CM 4

CRN 2761-08-2

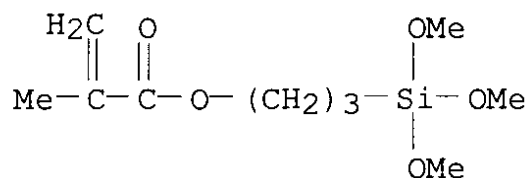
CMF C6 H10 O3



CM 5

CRN 2530-85-0

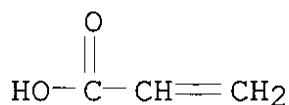
CMF C10 H20 O5 Si



CM 6

CRN 79-10-7

CMF C3 H4 O2



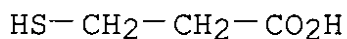
RN 500569-66-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, telomer with butyl 2-propenoate, 3-hydroxypropyl 2-propenoate, 3-mercaptopropanoic acid, 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 107-96-0

CMF C3 H6 O2 S



CM 2

CRN 500569-61-9

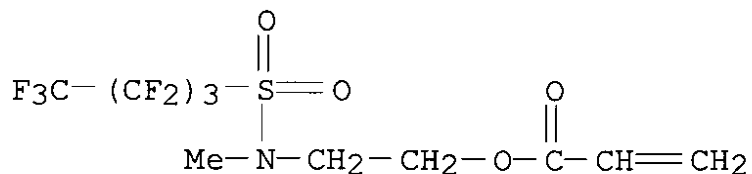
CMF (C10 H20 O5 Si . C10 H10 F9 N O4 S . C7 H12 O2 . C6 H10 O3 . C3 H4 O2)x

CCI PMS

CM 3

CRN 67584-55-8

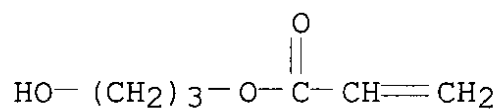
CMF C10 H10 F9 N O4 S



CM 4

CRN 2761-08-2

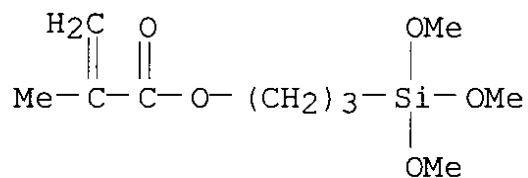
CMF C6 H10 O3



CM 5

CRN 2530-85-0

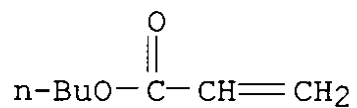
CMF C10 H20 O5 Si



CM 6

CRN 141-32-2

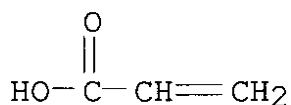
CMF C7 H12 O2



CM 7

CRN 79-10-7

CMF C3 H4 O2



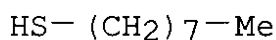
RN 500569-67-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, telomer with 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate, 1-octanethiol and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 111-88-6

CMF C8 H18 S



CM 2

CRN 500569-53-9

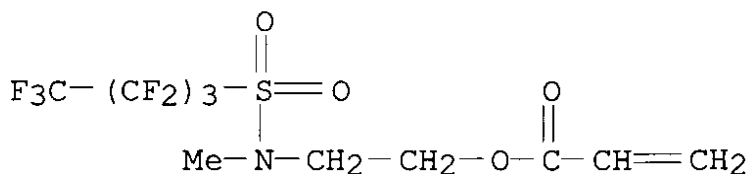
CMF (C10 H20 O5 Si . C10 H10 F9 N O4 S . C3 H4 O2)x

CCI PMS

CM 3

CRN 67584-55-8

CMF C10 H10 F9 N O4 S

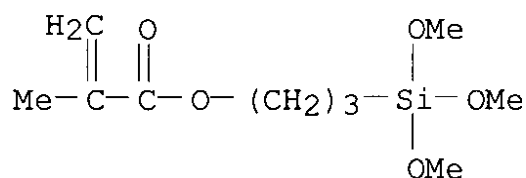


CM 4

CRN 2530-85-0

CMF C10 H20 O5 Si

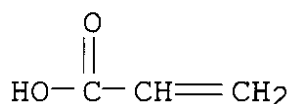




CM 5

CRN 79-10-7

CMF C3 H4 O2



IC ICM C04B041-48

ICS C08F220-24; E21B043-25

CC 58-4 (Cement, Concrete, and Related Building Materials)

Section cross-reference(s): 38, 40, 42, 45, 51, 61

IT 500569-53-9P 500569-54-0P 500569-55-1P

500569-56-2P 500569-57-3P 500569-58-4P

500569-59-5P 500569-60-8P 500569-61-9P

500569-62-0P 500569-63-1P 500569-64-2P

500569-65-3P 500569-66-4P 500569-67-5P

(aq. treating compn.; aq. fluorochem. polymer compn. for water and oil repellent treatment of masonry and well bores and porous materials)

L56 ANSWER 5 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN

2003:152566 Document No. 138:212565 Production method of electroluminescent component using hydrophilic pattern and printing process. Aoki, Daigo; Suzuki, Satoshi (Dai Nippon Printing Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2003059655 A2 20030228, 17 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-242160 20010809.

AB The invention refers to a prodn. method of an electroluminescent component wherein a printing plate with patterned hydrophilic regions are formed on a surface with variable wettability, coating material to form the org. electroluminescent layer is placed on the hydrophilic regions, and the org. material is printed onto a substrate, in order to easily form patterns with high detail.

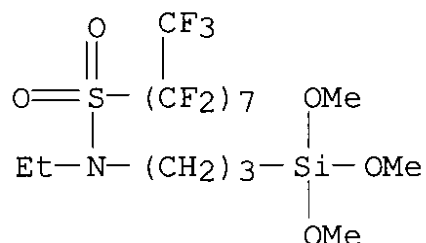
IT 293741-64-7

(prodn. method of electroluminescent component using hydrophilic pattern and printing process)

RN 293741-64-7 HCAPLUS  
 CN 1-Octanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-[3-(trimethoxysilyl)propyl]-, polymer with trimethoxymethylsilane (9CI) (CA INDEX NAME)

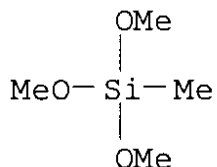
CM 1

CRN 61660-12-6  
 CMF C16 H20 F17 N 05 S Si



CM 2

CRN 1185-55-3  
 CMF C4 H12 O3 Si



IC ICM H05B033-10  
 ICS G09F009-00; G09F009-30; H05B033-12; H05B033-14  
 CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)  
 Section cross-reference(s): 74  
 ST electroluminescent device printing plate transfer  
**photoresist**  
 IT 220946-52-1, ST-K 01 **293741-64-7**  
 (prodn. method of electroluminescent component using hydrophilic pattern and printing process)

L56 ANSWER 6 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN  
 2002:142819 Document No. 136:201928 Urethane-based stain-release coatings. Fan, Wayne W.; Martin, Steven J.; Qiu, Zai-Ming;

Terrazas, Michael S. (3M Innovative Properties Company, USA). PCT Int. Appl. WO 2002014443 A2 20020221, 81 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2001-US22059 20010712. PRIORITY: US 2000-PV225061 20000814; US 2000-PV226049 20000816; US 2001-804447 20010312.

AB This invention relates to chem. compns. comprising  $\geq 1$  urethaneoligomers of  $\geq 2$  repeating units selected from the group consisting of F-contg. urethane oligomers and long-chain hydrocarbon-contg. urethane oligomers. These urethane oligomers comprise the reaction product of (a)  $\geq 1$  polyfunctional isocyanate compds., (b)  $\geq 1$  polyols, (c)  $\geq 1$  monoalcs. selected from the group consisting of fluorochem. monoalcs., optionally substituted long-chain hydrocarbon monoalcs., and mixts., (d)  $\geq 1$  silanes; and optionally (e)  $\geq 1$  water-solubilizing compds. comprising  $\geq 1$  water-solubilizing groups and  $\geq 1$  isocyanate-reactive H contg. group. The chem. compns. can be applied as coatings and these coatings can impart stain-release characteristics and **resist** being worn-off due to wear and abrasion. The water-sol. N-3300-C4F9SO2N(CH2CH2OH)2-glycolic acid-3-aminopropyltriethoxysilane condensate methyldiethanolamine salt form was coated as a 3% soln. on slate tile; showing excellent stain resistance to grape juice, transmission fluid, motor oil, wine, coffee, brake fluid, and corn oil.

IT **400781-91-1DP**, reaction products with fluoroalc. or hydrocarbon alc. **400782-02-7DP**, reaction products with fluoroalc. or hydrocarbon alc. **400782-21-0DP**, reaction products with fluoroalc. or hydrocarbon alc. **400782-22-1DP**, reaction products with fluoroalc. or hydrocarbon alc. **400782-23-2DP**, reaction products with fluoroalc. or hydrocarbon alc. **400782-24-3DP**, reaction products with fluoroalc. or hydrocarbon alc. **400782-25-4DP**, reaction products with fluoroalc. or hydrocarbon alc. **400782-27-6DP**, reaction products with fluoroalc. or hydrocarbon alc. **400782-32-3DP**, reaction products with fluoroalc. or hydrocarbon alc.

(fluorine-contg. urethane-based stain-release coatings on hard surfaces)

RN 400781-91-1 HCAPLUS

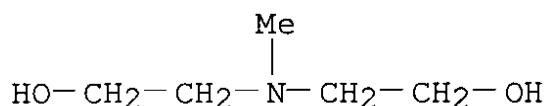
CN Acetic acid, hydroxy-, polymer with N,N-bis(2-hydroxyethyl)-1-

butanesulfonamide, Desmodur N 3300 and 3-(triethoxysilyl)-1-propanamine, compd. with 2,2'-(methylimino)bis[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 105-59-9

CMF C5 H13 N O2



CM 2

CRN 400781-90-0

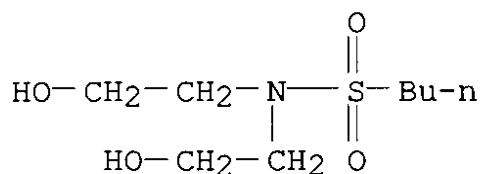
CMF (C9 H23 N O3 Si . C8 H19 N O4 S . C2 H4 O3 . Unspecified)x

CCI PMS

CM 3

CRN 400781-89-7

CMF C8 H19 N O4 S



CM 4

CRN 104559-01-5

CMF Unspecified

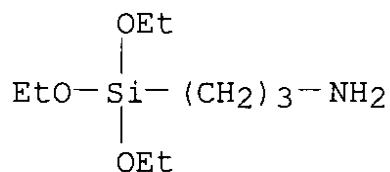
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 5

CRN 919-30-2

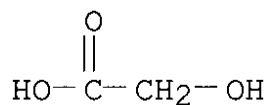
CMF C9 H23 N O3 Si



CM 6

CRN 79-14-1

CMF C2 H4 O3



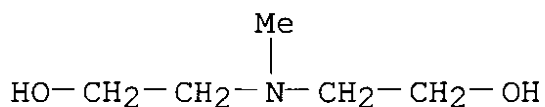
RN 400782-02-7 HCAPLUS

CN 1,2,3-Propanetricarboxylic acid, 2-hydroxy-, polymer with  
N,N-bis(2-hydroxyethyl)-1-butanesulfonamide, Desmodur N 3300 and  
3-(triethoxysilyl)-1-propanamine, compd. with 2,2'-  
(methylimino)bis[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 105-59-9

CMF C5 H13 N O2



CM 2

CRN 400782-01-6

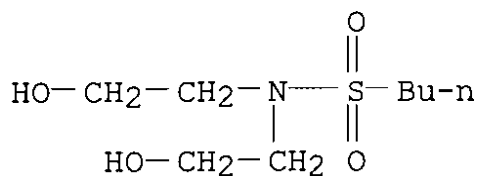
CMF (C9 H23 N O3 Si . C8 H19 N O4 S . C6 H8 O7 . Unspecified)x

CCI PMS

CM 3

CRN 400781-89-7

CMF C8 H19 N O4 S



CM 4

CRN 104559-01-5

CMF Unspecified

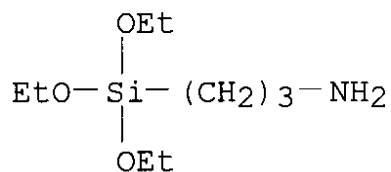
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 5

CRN 919-30-2

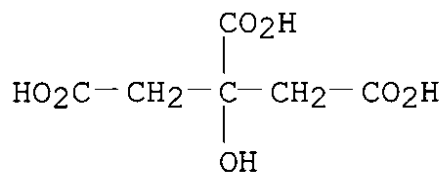
CMF C9 H23 N O3 Si



CM 6

CRN 77-92-9

CMF C6 H8 O7



RN 400782-21-0 HCAPLUS

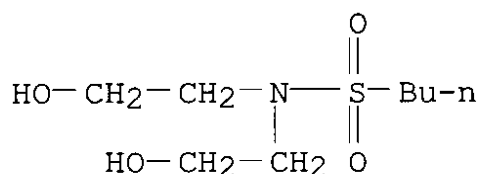
CN 1-Butanesulfonamide, N,N-bis(2-hydroxyethyl)-, polymer with Desmodur

N 3300 and 3-(trimethoxysilyl)-1-propanamine (9CI) (CA INDEX NAME)

CM 1

CRN 400781-89-7

CMF C8 H19 N O4 S



CM 2

CRN 104559-01-5

CMF Unspecified

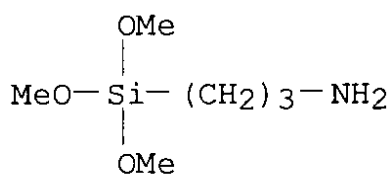
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 3

CRN 13822-56-5

CMF C6 H17 N O3 Si



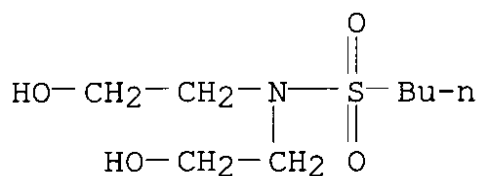
RN 400782-22-1 HCAPLUS

CN Silicic acid (H<sub>4</sub>SiO<sub>4</sub>), tetraethyl ester, polymer with  
N,N-bis(2-hydroxyethyl)-1-butanefulfonamide, Desmodur N 3300 and  
3-(trimethoxysilyl)-1-propanamine (9CI) (CA INDEX NAME)

CM 1

CRN 400781-89-7

CMF C8 H19 N O4 S



CM 2

CRN 104559-01-5

CMF Unspecified

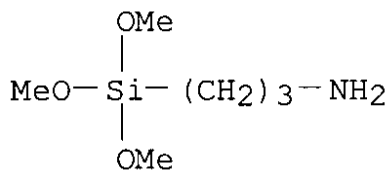
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 3

CRN 13822-56-5

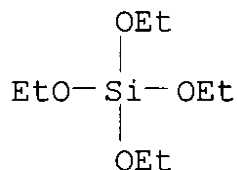
CMF C6 H17 N O3 Si



CM 4

CRN 78-10-4

CMF C8 H20 O4 Si



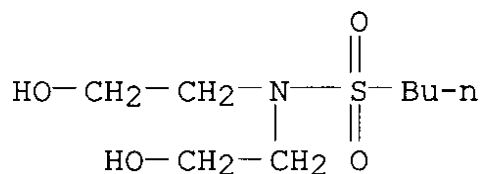
RN 400782-23-2 HCAPLUS

CN 1-Butanesulfonamide, N,N-bis(2-hydroxyethyl)-, polymer with Desmodur  
 N 3300 and 3-(trimethoxysilyl)-1-propanethiol (9CI) (CA INDEX NAME)

CM 1



CRN 400781-89-7  
CMF C8 H19 N O4 S



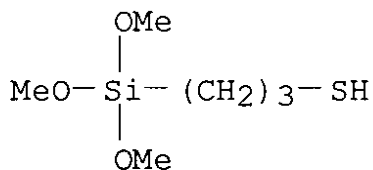
CM 2

CRN 104559-01-5  
CMF Unspecified  
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 3

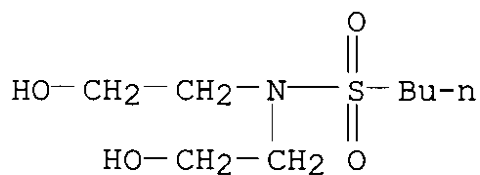
CRN 4420-74-0  
CMF C6 H16 O3 S Si



RN 400782-24-3 HCAPLUS  
CN 1-Butanesulfonamide, N,N-bis(2-hydroxyethyl)-, polymer with Desmodur N 100 and 3-(trimethoxysilyl)-1-propanamine (9CI) (CA INDEX NAME)

CM 1

CRN 400781-89-7  
CMF C8 H19 N O4 S



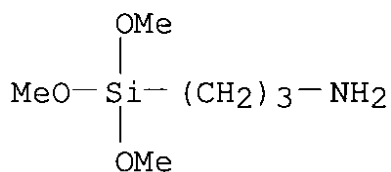
CM 2

CRN 53200-31-0  
 CMF Unspecified  
 CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 3

CRN 13822-56-5  
 CMF C6 H17 N O3 Si

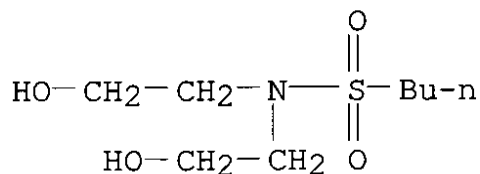


RN 400782-25-4 HCAPLUS

CN 1-Butanesulfonamide, N,N-bis(2-hydroxyethyl)-, polymer with Desmodur  
 H and 3-(trimethoxysilyl)-1-propanamine (9CI) (CA INDEX NAME)

CM 1

CRN 400781-89-7  
 CMF C8 H19 N O4 S



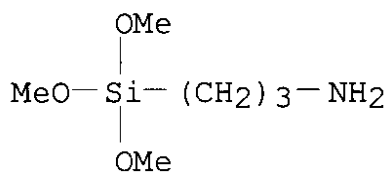
CM 2

CRN 52276-54-7  
 CMF Unspecified  
 CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 3

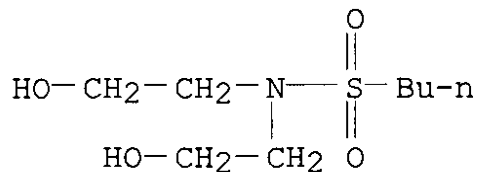
CRN 13822-56-5  
 CMF C6 H17 N O3 Si



RN 400782-27-6 HCAPLUS  
 CN 1-Butanesulfonamide, N,N-bis(2-hydroxyethyl)-, polymer with  
 1,6-diisocyanatohexane and 3-(trimethoxysilyl)-1-propanamine (9CI)  
 (CA INDEX NAME)

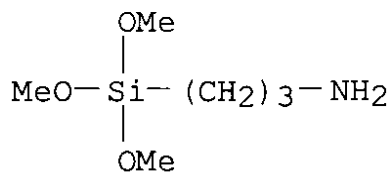
CM 1

CRN 400781-89-7  
 CMF C8 H19 N O4 S



CM 2

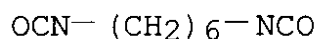
CRN 13822-56-5  
 CMF C6 H17 N O3 Si



CM 3

CRN 822-06-0

CMF C8 H12 N2 O2



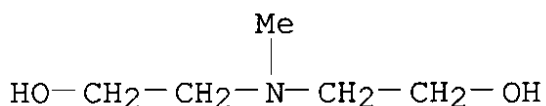
RN 400782-32-3 HCAPLUS

CN Glycine, N,N-bis(2-hydroxyethyl)-, polymer with N,N-bis(2-hydroxyethyl)-1-butanesulfonamide, Desmodur N 3300, hydroxyacetic acid and 3-(trimethoxysilyl)-1-propanamine, compd. with 2,2'-(methyylimino)bis[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 105-59-9

CMF C5 H13 N O2



CM 2

CRN 400782-31-2

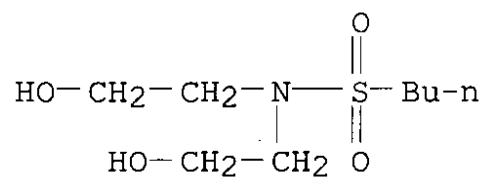
CMF (C8 H19 N O4 S . C6 H17 N O3 Si . C6 H13 N O4 . C2 H4 O3 . Unspecified)x

CCI PMS

CM 3

CRN 400781-89-7

CMF C8 H19 N O4 S



CM 4

CRN 104559-01-5

CMF Unspecified

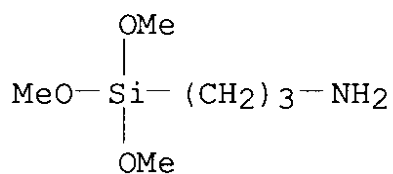
CCI MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 5

CRN 13822-56-5

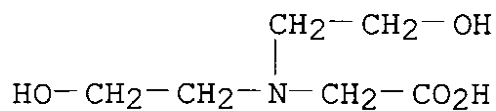
CMF C6 H17 N O3 Si



CM 6

CRN 150-25-4

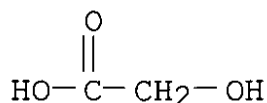
CMF C6 H13 N O4



CM 7

CRN 79-14-1

CMF C2 H4 O3



IC ICM C09D175-04  
ICS C08G018-28

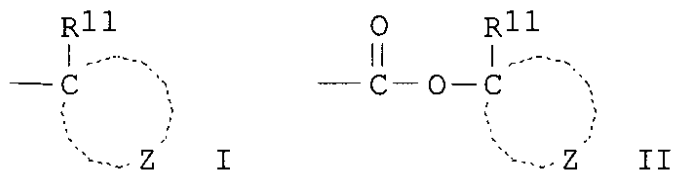
CC 42-10 (Coatings, Inks, and Related Products)

IT 111-87-5DP, 1-Octanol, reaction products with urethane-silane condensate salt 112-30-1DP, 1-Decanol, reaction products with urethane-silane condensate salt 112-53-8DP, 1-Dodecanol, reaction products with urethane-silane condensate salt 112-72-1DP, 1-Tetradecanol, reaction products with urethane-silane condensate salt 112-92-5DP, 1-Octadecanol, reaction products with urethane-silane condensate salt 307-30-2DP, reaction products with urethane-silane condensate salt 375-01-9DP, 2,2,3,3,4,4,4-Heptafluorobutanol, reaction products with urethane-silane condensate salt 377-66-2DP, reaction products with urethane-silane condensate salt 647-42-7DP, reaction products with urethane-silane condensate salt 24448-09-7DP, reaction products with urethane-silane condensate salt 28788-68-3DP, Perfluorocyclohexylmethanol, reaction products with urethane-silane condensate salt 36653-82-4DP, 1-Hexadecanol, reaction products with urethane-silane condensate salt 400781-88-6DP, reaction products with fluoroalc. or hydrocarbon alc. 400781-88-6DP, reaction products with urethane-silane condensate salt **400781-91-1DP**, reaction products with fluoroalc. or hydrocarbon alc. 400781-93-3DP, reaction products with fluoroalc. or hydrocarbon alc. 400781-95-5DP, reaction products with fluoroalc. or hydrocarbon alc. 400781-97-7DP, reaction products with fluoroalc. or hydrocarbon alc. 400781-98-8DP, reaction products with urethane-silane condensate salt 400781-99-9DP, reaction products with urethane-silane condensate salt 400782-00-5DP, reaction products with urethane-silane condensate salt **400782-02-7DP**, reaction products with fluoroalc. or hydrocarbon alc. 400782-04-9DP, reaction products with fluoroalc. or hydrocarbon alc. 400782-06-1DP, reaction products with fluoroalc. or hydrocarbon alc. 400782-08-3DP, reaction products with fluoroalc. or hydrocarbon alc. 400782-10-7DP, reaction products with fluoroalc. or hydrocarbon alc. 400782-12-9DP, reaction products with fluoroalc. or hydrocarbon alc. 400782-14-1DP, reaction products with fluoroalc. or hydrocarbon alc. 400782-16-3DP, reaction products with fluoroalc. or hydrocarbon alc. 400782-18-5DP, reaction products with fluoroalc. or hydrocarbon alc. 400782-20-9DP, reaction products with fluoroalc. or hydrocarbon alc. **400782-21-0DP**, reaction products with fluoroalc. or hydrocarbon alc. **400782-22-1DP**, reaction products with

fluoroalc. or hydrocarbon alc. **400782-23-2DP**, reaction products with fluoroalc. or hydrocarbon alc. **400782-24-3DP**, reaction products with fluoroalc. or hydrocarbon alc. **400782-25-4DP**, reaction products with fluoroalc. or hydrocarbon alc. **400782-26-5DP**, reaction products with fluoroalc. or hydrocarbon alc. **400782-27-6DP**, reaction products with fluoroalc. or hydrocarbon alc. **400782-32-3DP**, reaction products with fluoroalc. or hydrocarbon alc. **400782-34-5DP**, reaction products with fluoroalc. or hydrocarbon alc. (fluorine-contg. urethane-based stain-release coatings on hard surfaces)

L56 ANSWER 7 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN 2001:46104 Document No. 134:123570 Positive-working **photoresist** composition for far ultraviolet ray exposure. Sato, Kenichiro; Kawabe, Yasumasa (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2001013686 A2 20010119, 41 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-186607 19990630.

GI



AB The title compn. contains (a) a compd. generating an acid by actinic ray or radiation irradiation, (b) a resin which has  $\geq 1$  repeating unit selected from the following (i), (ii), and (iii) and is cleaved by the action of acid to increase the sol. to alkali, and (c) a mixed solvent contg. propyleneglycol monomethylether acetate or propionate and  $\geq 1$  selected from Et lactate, propyleneglycol monomethylether, and ethoxyethyl propionate. (i) a repeating unit having alkali-sol. groups protected with  $\geq 1$  group selected from alicyclic hydrocarbon structure-contg. groups I, CR12R13R14, CH(OR15)R16, CR19R21CR17:CR18R20, CR22R25CHR23COR24, and II (R11 = Me, Et, Pr, iso-Pr, Bu, iso-Bu, sec-Bu; Z = atoms required to form an alicyclic hydrocarbon group along with the C atom; R12-16 = C1-4 straight-chain or branched alkyl, alicyclic hydrocarbon,  $\geq 1$  of R12-14 or either R15 or R16 is alicyclic hydrocarbon; R17-21 = H, C1-4 straight-chain or branched alkyl, alicyclic hydrocarbon,  $\geq 1$  of R17-21 is alicyclic hydrocarbon and either R19 or R21 is C1-4 straight-chain or branched alkyl or alicyclic hydrocarbon; R22-25 = C1-4 straight-chain or branched alkyl, alicyclic hydrocarbon,  $\geq 1$  of R22-25 is alicyclic hydrocarbon). (ii) a

repeating unit  $\text{CH}_2\text{CR}_1(\text{CO}_2\text{X}_1\text{Lc})$  ( $\text{R}_1 = \text{H}$ , halo, C1-4 straight-chain or branched alkyl;  $\text{X}_1 =$  divalent linking group;  $\text{Lc} =$  lactone group).

(iii)  $\geq 1$  repeating unit selected from  $\text{CH}_2\text{CR}_1(\text{CO}_2\text{H})$ ,  $\text{CH}_2\text{CR}_1\text{X}_2\text{OCR}_3\text{OR}_3\text{CR}_3\text{R}_3\text{SO}(\text{CR}_3\text{R}_3\text{CR}_3\text{R}_3\text{O})\text{mR}$ ,  $\text{CH}_2\text{CR}_1(\text{Z}_1\text{R}_3\text{AR}_3)$ , and  $\text{CH}_2\text{CR}_1(\text{CO}_2\text{R}_4\text{SO}_2\text{OR}_4)$  [ $\text{R}_1 = \text{H}$ , halo, C1-4 straight-chain or branched alkyl;  $\text{R}_3\text{O}-\text{R}_3 = \text{H}$ , (substituted) alkyl;  $\text{R} = \text{H}$ , alkyl, cyclic alkyl, aryl, aralkyl (these groups may be substituted);  $\text{m} = 1-10$ ;  $\text{X}_2 =$  single bond, alkylene, cyclic alkylene, arylene, divalent group which is composed of  $\geq 1$  of ether, thioether, carbonyl, ester, amide, **sulfonamide**, urethane, and urea groups and is not cleaved by the action of acid;  $\text{Z}_1 =$  single bond, ether, ester, amide, alkylene, divalent group composed of these groups;  $\text{R}_3\text{O} =$  single bond, alkylene, arylene, divalent group composed of these groups;  $\text{R}_3 =$  alkylene, arylene, divalent group composed of these groups;  $\text{R}_3 =$  alkyl, cyclic alkyl, aryl, aralkyl (these groups may be substituted);  $\text{R}_4 = \text{H}$ , alkyl, cyclic alkyl, alkenyl, aryl, aralkyl (these groups may be substituted);  $\text{A} = \text{CONHSO}_2$ ,  $\text{SO}_2\text{NHCO}$ ,  $\text{NHCONHSO}_2$ ,  $\text{SO}_2\text{NHCONH}$ ,  $\text{OCONHSO}_2$ ,  $\text{SO}_2\text{NHCO}_2$ ,  $\text{SO}_2\text{NHSO}_2$ ]. The **resist** shows high sensitivity toward far UV rays, esp. ArF excimer laser beams and the **resist** soln. exhibits improved storage stability.

- IC ICM G03F007-039  
ICS H01L021-027; C08F020-10
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST **photoresist** solvent far UV; alkali soluble resin  
**photoresist**
- IT **Photoresists**  
(UV; **photoresist** compn. contg. acid generator, alkali-sol. resin., and solvent)
- IT **Polysiloxanes**, uses  
(surfactant; **photoresist** compn. contg. acid generator, alkali-sol. resin., and solvent)
- IT 102-82-9, Tributylamine 3001-72-7, 1,5-Diazabicyclo[4.3.0]-5-nonene 41556-26-7, Bis(1,2,2,6,6-pentamethyl-4-piperidyl)sebacate  
(base; **photoresist** compn. contg. acid generator, alkali-sol. resin., and solvent)
- IT 216308-45-1P 288303-52-6P, Butyrolactone methacrylate-methacrylic acid-2-methyl-2-adamantyl methacrylate copolymer 290819-17-9P  
297156-53-7P 304441-22-3P 307976-24-5P 307976-27-8P  
307976-28-9P 307976-29-0P 320779-28-0P 320779-29-1P  
320779-30-4P 320779-31-5P 320779-33-7P 320779-35-9P  
320779-36-0P 320779-38-2P 320779-39-3P 320779-40-6P  
320779-41-7P 320779-42-8P 320779-43-9P 320779-45-1P  
320779-46-2P 320779-47-3P  
(**photoresist** compn. contg. acid generator, alkali-sol. resin., and solvent)
- IT 66003-78-9, Triphenylsulfonium triflate 144317-44-2,



Triphenylsulfonium perfluorobutanesulfonate 258341-99-0  
307976-40-5

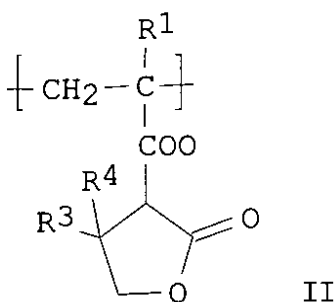
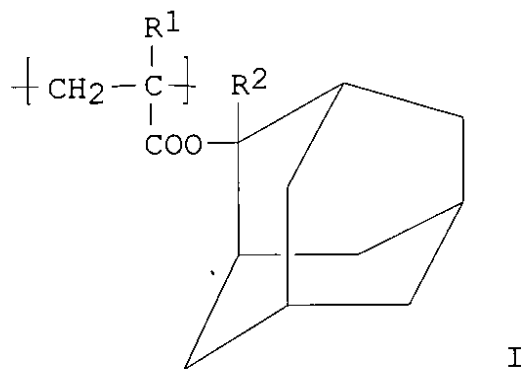
(**photoresist** compn. contg. acid generator, alkali-sol.  
resin., and solvent)

IT 97-64-3, Ethyl lactate 1320-67-8, Propyleneglycol monomethylether  
14272-48-1 84540-57-8, Propyleneglycol monomethylether acetate  
98516-33-7, Propyleneglycol monomethylether propionate  
(solvent; **photoresist** compn. contg. acid generator,  
alkali-sol. resin., and solvent)

IT 101063-04-1, Megafac F 174 216679-67-3, MegafacR 08  
(surfactant; **photoresist** compn. contg. acid generator,  
alkali-sol. resin., and solvent)

L56 ANSWER 8 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN  
2000:823000 Document No. 133:367848 Positive-working **resist**  
composition. Sato, Kenichiro; Kodama, Kunihiro; Aogo, Toshiaki  
(Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP  
2000321771 A2 20001124, 32 pp. (Japanese). CODEN: JKXXAF.  
APPLICATION: JP 1999-127296 19990507.

GI



AB The title **resist** compn. contains (a) a resin which has

repeating units I, II, and  $\geq 1$  selected from  $\text{CH}_2\text{CR}_1(\text{CO}_2\text{H})$ ,  $\text{CH}_2\text{CR}_1[\text{XOCR}_5\text{R}_7\text{CR}_6\text{R}_8\text{O}(\text{CR}_9\text{R}_{10}\text{CR}_{11}\text{R}_{12}\text{O})_m\text{R}]$ ,  $\text{CH}_2\text{CR}_1(\text{ZR}_{13}\text{AR}_{14})$ , and  $\text{CH}_2\text{CR}_1(\text{CO}_2\text{R}_{15}\text{SO}_2\text{OR}_{16})$  [ $\text{R}_1 = \text{H}, \text{Me}$ ;  $\text{R}_2 = \text{C1-4 alkyl}$ ;  $\text{R}_3, \text{R}_4 = \text{H}, \text{C1-4 alkyl}$ ;  $\text{R}_5\text{-12} = \text{H}, (\text{substituted}) \text{ alkyl}$ ;  $\text{R} = \text{H}, (\text{substituted}) \text{ alkyl}, (\text{substituted}) \text{ cycloalkyl}, (\text{substituted}) \text{ aryl}, (\text{substituted}) \text{ aralkyl}$ ;  $m = 1\text{-}10$ ;  $\text{X} = \text{single bond}, (\text{substituted}) \text{ alkylene}, (\text{substituted}) \text{ cycloalkylene}, (\text{substituted}) \text{ arylene}, \text{divalent group which is composed of } \geq 1 \text{ group selected from ether, thioether, carbonyl, ester, amide, sulfonamide, urethane, and urea groups and is not decompd. by the action of acid}$ ;  $\text{Z} = \text{single bond, ether, ester, amide, alkylene, divalent group composed of these groups}$ ;  $\text{R}_{13} = \text{single bond, alkylene, arylene, divalent group composed of these groups}$ ;  $\text{R}_{14} = (\text{substituted}) \text{ alkyl}, (\text{substituted}) \text{ cycloalkyl}, (\text{substituted}) \text{ aryl}, (\text{substituted}) \text{ aralkyl}$ ;  $\text{R}_{15} = \text{alkylene, arylene, divalent group composed of these groups}$ ;  $\text{R}_{16} = \text{H}, (\text{substituted}) \text{ alkyl}, (\text{substituted}) \text{ cycloalkyl}, (\text{substituted}) \text{ alkenyl}, (\text{substituted}) \text{ aryl}, (\text{substituted}) \text{ aralkyl}$ ;  $\text{A} = \text{CONHSO}_2, \text{SO}_2\text{NHCO}, \text{NHCONHSO}_2, \text{SO}_2\text{NHCONH}, \text{OCONHSO}_2, \text{SO}_2\text{NHCO}_2, \text{SO}_2\text{NHSO}_2]$  and of which the dissoln. rate to alk. developing solns. is increased by the action of acid and (b) a compd. that generates an acid by irradiation with actinic ray or radiation. The compn. shows improved applicability to micro-photo-fabrication using far UV rays, esp. ArF excimer laser beams and developability and provides **resist** patterns with good profile and high resolu. contact holes.

- IC ICM G03F007-039  
ICS C08F220-04; C08F220-18; C08F220-28; C08K005-00; C08L033-02; C08L033-04; G03F007-004; H01L021-027
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38
- ST acrylic copolymer **photoresist**; acid generator  
**photoresist**; adamantyl acrylate copolymer  
**photoresist**; butyrolactone acrylate copolymer  
**photoresist**
- IT **Polysiloxanes**, uses  
(KP 341; pos. **photoresist** compn. contg. acrylic polymer and acid generator)
- IT Positive **photoresists**  
Surfactants  
(pos. **photoresist** compn. contg. acrylic polymer and acid generator)
- IT 9016-45-9, Polyoxyethylene nonyl phenyl ether 137462-24-9, Megafac F 176 216679-67-3, Megafac R08  
(pos. **photoresist** compn. contg. acrylic polymer and acid generator)
- IT 288303-52-6P, Butyrolactone methacrylate-methacrylic acid-2-methyl-2-adamantyl methacrylate copolymer 307976-24-5P 307976-25-6P 307976-26-7P 307976-27-8P 307976-28-9P

307976-29-0P 307976-30-3P 307976-32-5P 307976-33-6P  
 307976-34-7P 307976-36-9P 307976-37-0P 307976-39-2P

(pos. **photoresist** compn. contg. acrylic polymer and acid generator)

IT 66003-78-9, Triphenylsulfonium triflate 144317-44-2,  
 Triphenylsulfonium perfluorobutanesulfonate 307976-40-5  
 (pos. **photoresist** compn. contg. acrylic polymer and acid generator)

L56 ANSWER 9 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN

2000:733055 Document No. 133:310613 Preparation of polyhedral silsesquioxanes containing perfluoroalkyl and reactive groups and films thereof. Yamashita, Yukiya; Hayashi, Kenji; Ishihara, Masaoki (Mitsubishi Materials Corp., Japan; Dai Nippon Toryo Co., Ltd.). Jpn. Kokai Tokkyo Koho JP 2000290286 A2 20001017, 9 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-93459 19990331.

AB Silsesquioxanes  $[RfX_1(CH_2)_aSiO_{1.5}]_m[R(CH_2)_bSiO_{1.5}]_z$  and  $[RfX_1(CH_2)_aSiO_{1.5}]_m[RX_2(CH_2)_bSiO_{1.5}]_z$  ( $Rf$  = C1-16 perfluoroalkyl;  $R$  = reactive group;  $X_1, X_2$  = divalent group;  $a$  = 1-10;  $b$  = 0-10;  $m, z$  = 1-19 and  $m + z$  = 4-20), useful for manuf. of films with good heat resistance, low dielec. const., and low reflection, are prepd. Thus, hydrolysis of 28.4 g  $F_{17}C_8CH_2CH_2Si(OMe)_3$  and 2.5 g  $H_2C:CHSi(OMe)_3$  gave a silsesquioxane, which was made into a film (thickness 0.2  $\mu m$ ) having dielec. const. 3.1.

IT 302355-57-3P 302355-61-9P  
 (prepn. of polyhedral silsesquioxanes contg. perfluoroalkyl and reactive groups and films)

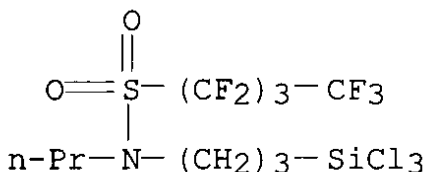
RN 302355-57-3 HCAPLUS

CN 1-Butanesulfonamide, 1,1,2,2,3,3,4,4,4-nonafluoro-N-propyl-N-[3-(trichlorosilyl)propyl]-, polymer with trimethoxy[3-(oxiranylmethoxy)propyl]silane (9CI) (CA INDEX NAME)

CM 1

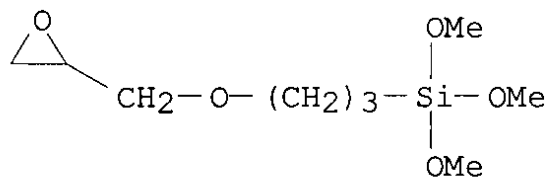
CRN 302355-56-2

CMF C10 H13 Cl3 F9 N O2 S Si



CM 2

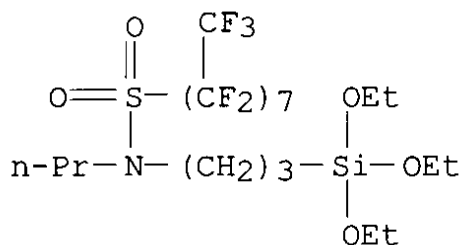
CRN 2530-83-8  
CMF C9 H20 O5 Si



RN 302355-61-9 HCAPLUS  
CN 1-Octanesulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptafluoro-N-propyl-N-[3-(triethoxysilyl)propyl]-, polymer with ethenyltrimethoxysilane (9CI) (CA INDEX NAME)

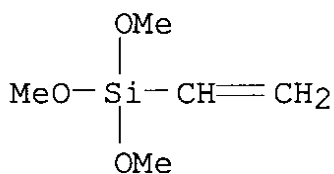
CM 1

CRN 136790-35-7  
CMF C20 H28 F17 N O5 S Si



CM 2

CRN 2768-02-7  
CMF C5 H12 O3 Si



IC ICM C07F007-18  
ICS C07F007-21; C08G077-24; C09K003-18  
CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 74, 76

IT Antireflective films  
Dielectric films  
Hybrid organic-inorganic materials  
Oil-resistant materials

**Photoresists**

(prepn. of polyhedral silsesquioxanes contg. perfluoroalkyl and reactive groups and films)

IT 302355-57-3P 302355-58-4P 302355-59-5P 302355-60-8P  
302355-61-9P

(prepn. of polyhedral silsesquioxanes contg. perfluoroalkyl and reactive groups and films)

L56 ANSWER 10 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN

1999:802936 Document No. 132:50663 Polyamide compositions for positive-working **photoresists** with good edge rinse property. Kenmochi, Tomonori; Banba, Toshio; Hirano, Takashi (Sumitomo Bakelite Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 11349810 A2 19991221 Heisei, 15 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1998-159535 19980608.

AB The compns. comprise polyamides 100, photo-sensitive diazoquinone compds. 1-100 and F-contg. surfactants 0.001-10 parts, where the polyamides bear units derived from dihydroxylated cyclic diamines, units derived from cyclic dicarboxylic acids, and optionally units derived from siloxanediamine compds., and have terminal groups derived from aliph. or alicyclic dicarboxylic anhydrides contg. alkenyl or alkynyl groups. Thus, heating a soln. of a 2:1 (mol/mol) 1-hydroxy-1,2,3-benzotriazole deriv. of di-Ph ether-4,4'-dicarboxylic acid, 2, and hexafluoro-2,2-bis(3-amino-4-hydroxyphenyl)propane 363.3 in N-methyl-2-pyrrolidone 3000 at 75° for 12 h, adding 5-norbornene-2,5-dicarboxylic anhydride 32.8, mixing for 12 h, filtering, adding into a 3/1 water/MeOH mixt. and washing the resulting ppt. gave a polyamide (I). Dissolving the I 100 with a diazoquinone 25 and 68% FC 170C (F-contg. surfactant) 0.03 in N-methyl-2-pyrrolidone 200 parts, mixing and filtering gave a photo-sensitive resin with good edge rinse property.

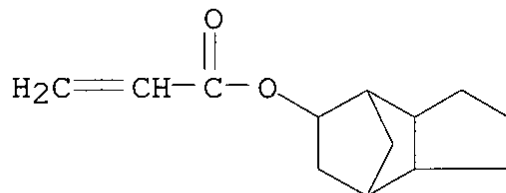
IT 252910-49-9  
(surfactant; polyamide compns. for pos.-working **photoresists** with good edge rinse property)

RN 252910-49-9 HCAPLUS

CN 2-Propenoic acid, 2-[[[(heptadecafluorooctyl)sulfonyl]propylamino]ethyl ester, polymer with dimethylsilanediol, ethenylmethylsilanediol, 3a,4,7,7a,?,?-hexahydro-4,7-methano-1H-indenyl 2-propenoate and octahydro-4,7-methano-1H-inden-5-yl 2-propenoate (9CI) (CA INDEX NAME)

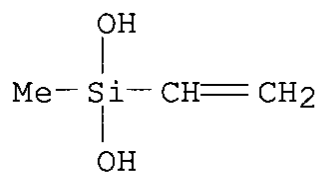
CM 1

CRN 7398-56-3  
CMF C13 H18 O2



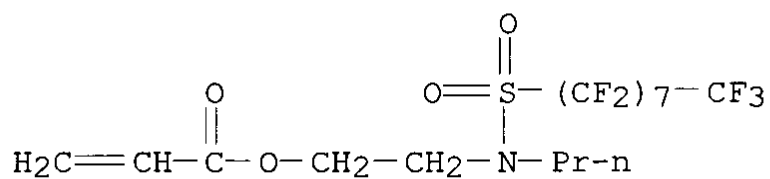
CM 2

CRN 3959-12-4  
CMF C3 H8 O2 Si



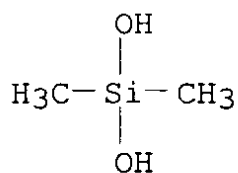
CM 3

CRN 2357-60-0  
CMF C16 H14 F17 N O4 S



CM 4

CRN 1066-42-8  
CMF C2 H8 O2 Si



CM 5

CRN 12542-30-2

CMF C13 H16 O2

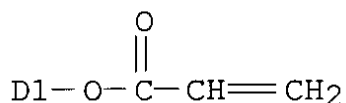
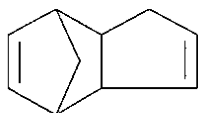
CCI IDS

CM 6

CRN 50976-02-8

CMF C13 H14 O2

CCI IDS



IC ICM C08L077-06  
 ICS C08G069-26; C08G077-455; C08K005-00; C08K005-43; C08K005-23  
 CC 37-3 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 74  
 ST pos working **photoresist** polyamide compn; diphenyl ether  
 dicarboxylic acid polyamide pos working **photoresist**;  
 fluoro surfactant pos working **photoresist**; edge rinse  
 property pos working **photoresist**; diazoquinone photocuring  
 catalyst **photoresist** polyamide  
 IT Electric insulators  
 Photoimaging materials  
 Positive **photoresists**  
 Semiconductor devices  
 Surfactants  
 (polyamide compns. for pos.-working **photoresists** with

- good edge rinse property)
- IT Polyamides, properties  
(polyamide compns. for pos.-working **photoresists** with good edge rinse property)
- IT Polysiloxanes, properties  
Polysiloxanes, properties  
(polyamide-; polyamide compns. for pos.-working **photoresists** with good edge rinse property)
- IT Polyamides, properties  
Polyamides, properties  
(polysiloxane-; polyamide compns. for pos.-working **photoresists** with good edge rinse property)
- IT 110726-28-8D, diazoquinone deriv.  
(photosensitive reagents; polyamide compns. for pos.-working **photoresists** with good edge rinse property)
- IT 252903-80-3 252903-81-4 252903-83-6 252903-84-7  
(polyamide compns. for pos.-working **photoresists** with good edge rinse property)
- IT 29117-08-6 **252910-49-9**  
(surfactant; polyamide compns. for pos.-working **photoresists** with good edge rinse property)
- L56 ANSWER 11 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN  
1999:752377 Document No. 132:7565 Positive-working photosensitive resin composition useful in production of semiconductor devices. Kawabe, Yasumasa; Sato, Kenichiro; Aogo, Toshiaki (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 11327145 A2 19991126 Heisei, 14 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1998-132291 19980514.
- AB The title resin compn. contains (a) a cyclic aliph. hydrocarbon skeleton structure-contg. polymer that is decompd. by the action of acid to become alkali-sol., (b) a compd. that generates an acid upon active ray or radiation irradiation, (c) a **sulfonamide** structure-contg. compd. with mol. wt.  $\leq 1000$ , (d) a N-contg. basic compd., and (e) a F-type and/or Si-type surfactant. The compn. shows improved developability and provides a high resolu. pattern with good profile by using deep UV rays, esp., ArF excimer laser beams and is useful for manuf. of semiconductor devices.
- IC ICM G03F007-039  
ICS G03F007-004; H01L021-027
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38, 76
- ST **photoresist** alkali soluble polymer alicyclic hydrocarbon;  
**sulfonamide photoresist**; nitrogen basic compd  
**photoresist**; surfactant **photoresist**; semiconductor device **photoresist**
- IT Polysiloxanes, uses



- (KP 341; **photoresist** compn. contg. alkali-sol. polymer, acid generator, **sulfonamide**, basic compd., and surfactant)
- IT Surfactants  
(fluorosurfactants; **photoresist** compn. contg. alkali-sol. polymer, acid generator, **sulfonamide**, basic compd., and surfactant)
- IT **Photoresists**  
(**photoresist** compn. contg. alkali-sol. polymer, acid generator, **sulfonamide**, basic compd., and surfactant)
- IT 122752-67-4, tert-Butyl cholate  
(**photoresist** compn. contg. alkali-sol. polymer, acid generator, **sulfonamide**, basic compd., and surfactant)
- IT 100-97-0, uses 280-57-9, 1,4-Diazabicyclo[2.2.2]octane 3001-72-7, 1,5-Diazabicyclo[4.3.0]-5-nonene 6674-22-2 18271-17-5 41595-29-3 66003-78-9, Triphenylsulfonium triflate 137462-24-9, Megafac F176 169223-77-2, 1-Adamantyl acrylate-tert-butyl acrylate copolymer 195143-37-4, Acrylic acid-tert-butyl acrylate-maleic anhydride-norbornene copolymer 216679-67-3, Megafac R08 222170-69-6 251294-50-5 251294-52-7 251294-53-8  
(**photoresist** compn. contg. alkali-sol. polymer, acid generator, **sulfonamide**, basic compd., and surfactant)
- L56 ANSWER 12 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN  
1999:481685 Document No. 131:146036 Fluorine-containing surfactants for leveling agents. Tanaka, Kazuyoshi; Takano, Kiyoshi; Hashimoto, Yutaka (Dainippon Ink and Chemicals, Inc., Japan). Jpn. Kokai Tokkyo Koho JP 11209787 A2 19990803 Heisei, 39 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1998-15407 19980128.
- AB Surfactants useful as leveling agents in coating compns. and **resist** compns. comprise fluoroalkyl-contg. compds. with surface energy loss  $<110 + 10^{-5}$  mJ in an org. solvent. A fluorine-contg. surfactant of this invention was prepd. by polymg. 18 parts of CH<sub>2</sub>:CHCO<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>C<sub>8</sub>F<sub>17</sub>, 12 parts of  $\gamma$ -methacryloyloxypropyltris(trimethylsilyloxy)silane, 57 parts of monoacrylate of ethylene oxide-propylene oxide copolymer of mol. wt. 400, 4 parts of tetraethylene glycol dimethacrylate, and 9 parts of Me methacrylate using laurylmercaptan as chain-transfer agent. The surfactant had no.-av. mol. wt. 3800 and was used as leveling agent in a coating compn.
- IT **236104-13-5P**  
(fluorine-contg. surfactants for leveling agents)
- RN 236104-13-5 HCAPLUS
- CN 2-Propenoic acid, 2-methyl-, oxybis(2,1-ethanediylloxy-2,1-ethanediyl) ester, polymer with 2-[[heptadecafluorooctyl)sulfonyl]p-ropylamino]ethyl 2-propenoate, methyl 2-methyl-2-propenoate,  $\alpha$ -(1-oxo-2-propenyl)- $\omega$ -hydroxypoly(oxy-1,2-ethanediyl),  $\alpha$ -(1-oxo-2-propenyl)- $\omega$ -hydroxypoly[oxy(methyl-1,2-

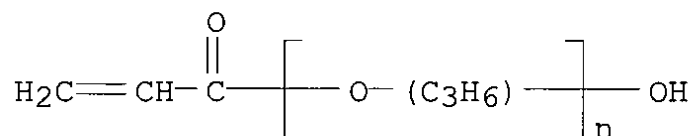
ethanediyl)] and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 50858-51-0

CMF (C3 H6 O)<sub>n</sub> C3 H4 O2

CCI IDS, PMS

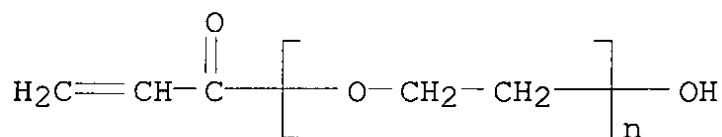


CM 2

CRN 26403-58-7

CMF (C2 H4 O)<sub>n</sub> C3 H4 O2

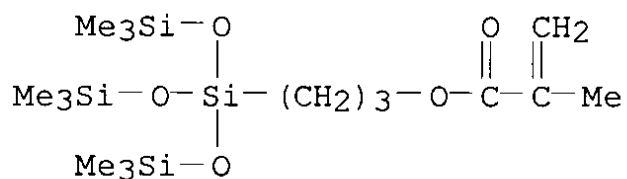
CCI PMS



CM 3

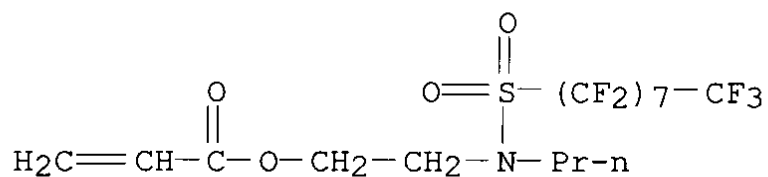
CRN 17096-07-0

CMF C16 H38 O5 Si4



CM 4

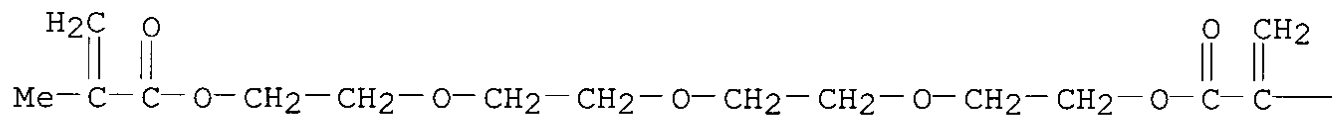
CRN 2357-60-0  
CMF C16 H14 F17 N O4 S



CM 5

CRN 109-17-1  
CMF C16 H26 O7

PAGE 1-A

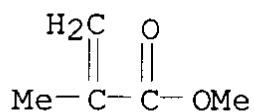


PAGE 1-B

— Me

CM 6

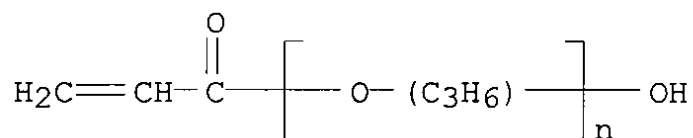
CRN 80-62-6  
CMF C5 H8 O2



IC ICM C11D001-04  
ICS B01F017-52; B01F017-54; C08F020-24; C08F030-08; C08F290-06;  
C09D007-06; C11D001-12; C11D001-34; C11D001-68; C11D001-72;

- C11D001-722; C11D001-74; G03F007-004
- CC 46-4 (Surface Active Agents and Detergents)  
Section cross-reference(s): 42, 74
- IT **Resists**  
(fluorine-contg. surfactants for leveling agents for  
**resist** compns.)
- IT 212628-37-0P **236104-13-5P** 236104-14-6P 236104-71-5P  
236104-72-6P 236104-73-7P 236104-74-8P  
(fluorine-contg. surfactants for leveling agents)
- L56 ANSWER 13 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN  
1998:576505 Document No. 129:232038 Fluoroalkyl- and  
siloxane-containing polymer surfactants and coating and  
**photoresist** compositions containing them. Tanaka,  
Kazuyoshi; Takano, Kiyoshi; Hashimoto, Yutaka (Dainippon Ink and  
Chemicals, Inc., Japan). Jpn. Kokai Tokkyo Koho JP 10230154 A2  
19980902 Heisei, 36 pp. (Japanese). CODEN: JKXXAF. APPLICATION:  
JP 1997-33717 19970218.
- AB The surfactants consist of copolymers of fluoroalkyl group-contg.  
ethylenically unsatd. monomers and other ethylenically unsatd.  
monomers having R6(SiR4R5O)pSiR4R5OSiR2R3 group [R2, R3 = C1-20  
alkyl, Ph, R9(SiR7R8O)pSiR7R8O; R4-9 = C1-20 alkyl, Ph; p = 0-3].  
The compns. show excellent leveling properties in a coating process  
at high speed and shear. Thus, CH2:CHCO2CH2CH2C8F17 18,  
(Me3SiO)3Si(CH2)3OCOCMe:CH2 12, ethylene oxide-propylene oxide  
copolymer monoacrylate 58, tetraethylene glycol dimethacrylate 4,  
and Me methacrylate 8 parts were copolymd. in Me2CHOH in the  
presence of AIBN and lauryl mercaptan to give a polymer (Mn 3500),  
which was added to acrylic or alkyd-melamine coatings to show good  
antifoaming, leveling, and recoating properties.
- IT **212628-36-9P**  
(fluoroalkyl- and siloxane-contg. polymer surfactants for  
improved antifoaming, recoating, and leveling properties of  
coatings and **photoresists**)
- RN 212628-36-9 HCAPLUS
- CN 2-Propenoic acid, 2-methyl-, oxybis(2,1-ethanedioxy-2,1-  
ethanedioyl) ester, polymer with 2-[[heptadecafluorooctyl)sulfonyl]p  
ropylamino]ethyl 2-propenoate, methyl 2-methyl-2-propenoate,  
 $\alpha$ -(1-oxo-2-propenyl)- $\omega$ -hydroxypoly(oxy-1,2-ethanedioyl),  
 $\alpha$ -(1-oxo-2-propenyl)- $\omega$ -hydroxypoly[oxy(methyl-1,2-  
ethanedioyl)] and 3-[3,3,3-trimethyl-1,1-  
bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate,  
graft (9CI) (CA INDEX NAME)
- CM 1
- CRN 50858-51-0
- CMF (C3 H6 O)n C3 H4 O2

CCI IDS, PMS

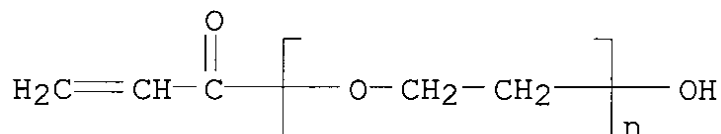


CM 2

CRN 26403-58-7

CMF (C2 H4 O)<sub>n</sub> C3 H4 O2

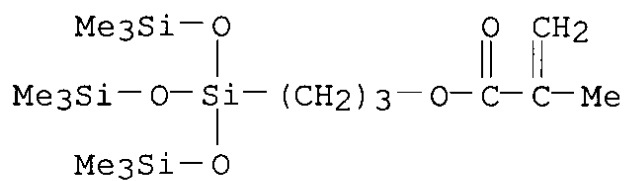
CCI PMS



CM 3

CRN 17096-07-0

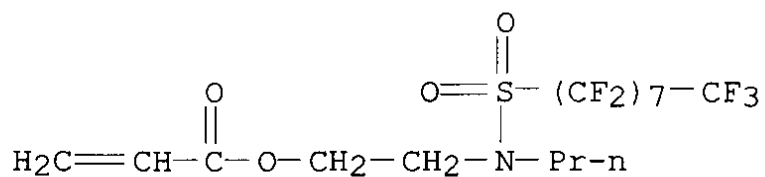
CMF C16 H38 O5 Si4



CM 4

CRN 2357-60-0

CMF C16 H14 F17 N O4 S

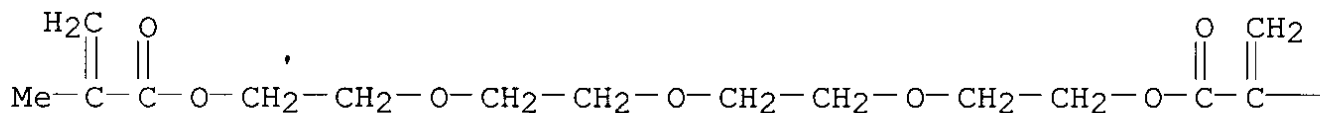


CM 5

CRN 109-17-1

CMF C16 H26 O7

PAGE 1-A



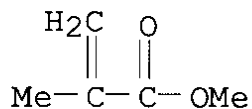
PAGE 1-B

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CM 6

CRN 80-62-6

CMF C5 H8 O2



IC ICM B01F017-54

ICS C08F220-22; C08F230-08; C08F290-06

CC 42-5 (Coatings, Inks, and Related Products)

Section cross-reference(s): 74

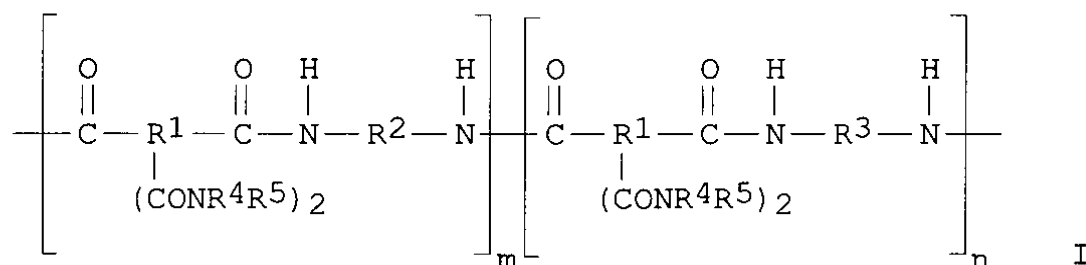
ST siloxane fluoroalkyl acrylate polymer antifoaming coating; leveling agent fluoroalkyl acrylate siloxane polymer; **photoresist**

- surfactant siloxane fluoroalkyl acrylate polymer
- IT Alkyd resins  
(Beckosol WB 703; fluoroalkyl- and siloxane-contg. polymer surfactants for improved antifoaming, recoating, and leveling properties of coatings and **photoresists**)
- IT Polyoxyalkylenes, uses  
(acrylic, graft; fluoroalkyl- and siloxane-contg. polymer surfactants for improved antifoaming, recoating, and leveling properties of coatings and **photoresists**)
- IT Aminoplasts  
(alkyd resins crosslinked with; fluoroalkyl- and siloxane-contg. polymer surfactants for improved antifoaming, recoating, and leveling properties of coatings and **photoresists**)
- IT Antifoaming agents  
Coating materials  
Leveling agents  
**Photoresists**  
Surfactants  
(fluoroalkyl- and siloxane-contg. polymer surfactants for improved antifoaming, recoating, and leveling properties of coatings and **photoresists**)
- IT Acrylic polymers, uses  
(fluoroalkyl- and siloxane-contg. polymer surfactants for improved antifoaming, recoating, and leveling properties of coatings and **photoresists**)
- IT 9003-08-1, Super Beckamine L 117-60  
(alkyd resins crosslinked with; fluoroalkyl- and siloxane-contg. polymer surfactants for improved antifoaming, recoating, and leveling properties of coatings and **photoresists**)
- IT 191667-44-4P **212628-36-9P** 212628-37-0P 212716-56-8P  
212716-57-9P 212716-58-0P 212716-59-1P 212716-60-4P  
(fluoroalkyl- and siloxane-contg. polymer surfactants for improved antifoaming, recoating, and leveling properties of coatings and **photoresists**)
- IT 9016-83-5, Cresol-formaldehyde copolymer 68510-93-0,  
2,3,4-Trihydroxybenzophenone 1,2-naphthoquinonediazide-5-sulfonate  
122176-95-8, Acrylic A 181 193560-18-8, Acrylic A 801P-Burnock DN  
980 copolymer 212897-02-4  
(fluoroalkyl- and siloxane-contg. polymer surfactants for improved antifoaming, recoating, and leveling properties of coatings and **photoresists**)

L56 ANSWER 14 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN  
1998:41991 Document No. 128:174145 Manufacture of relief pattern using positive-type heat resistant photosensitive polymer composition. Nunomura, Masataka; Uchimura, Shunichiro (Hitachi Chemical Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 10007796 A2 19980113 Heisei, 8 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP

1996-167465 19960627.

GI



AB The pos.-type heat resistant photosensitive polymer compn. comprises an o-quinonediazide compd. and compd. I ( R1 = C $\geq$ 2 tetravalent org. group; R2 = C $\geq$ 2 divalent org. group contg. carboxylic or phenolic hydroxy group; R3 = trivalent org. contg. heterocyclic ring; R4 = H, C $\geq$ 1 monovalent org., R5 = C $\geq$ 1 monovalent org.; ratio between m and n is 20-90% m and 80-10% n). The process for the relief pattern comprises coating the compn. on a substrate, drying, exposing, developing, and heating. The compn. shows high sensitivity and is suitable as a surface protecting film and a layer-to-layer insulating film.

IC ICM C08G073-10

ICS C08K005-28; C08L079-08; C09D179-08; G03F007-022; G03F007-037

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 42

IT Positive **photoresists**

(manuf. of relief pattern using pos.-type heat resistant photosensitive polymer compn.)

IT **Polysiloxanes**, preparation

**Polysiloxanes**, preparation

(polyamide-; pos.-type heat resistant photosensitive polymer compn. for relief pattern)

IT Polyamides, preparation

Polyamides, preparation

(**polysiloxane**-; pos.-type heat resistant photosensitive polymer compn. for relief pattern)

IT 101-80-4DP, **sulfonamide** reaction products with

o-quinonediazidesulfonyl chloride deriv. 3770-97-6DP,

**sulfonamide** reaction products with oxybisbenzeneamine deriv.

(pos.-type heat resistant photosensitive polymer compn. for relief pattern)



L56 ANSWER 15 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN

1997:317803 Document No. 126:299683 **Photoresist** composition with improved coatability. Hashimoto, Yutaka; Tanaka, Kazuyoshi (Dainippon Ink & Chemicals, Japan). Jpn. Kokai Tokkyo Koho JP 09054432 A2 19970225 Heisei, 22 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1995-210641 19950818.

AB The title compn. contains a copolymer of fluoroalkyl group-contg. (meth)acrylate monomers and silicone chain-contg. ethylenic unsatd. monomers. The compn. shows good coatability upon spin-coating and storage stability, and gives fine patterns.

IT **189084-87-5P**

(**photoresist** compn. contg. copolymer of fluoroalkyl (meth)acrylate and silicone-contg. ethylenic compd.)

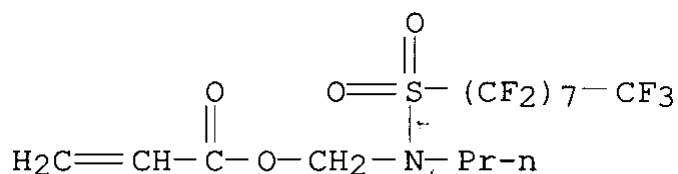
RN 189084-87-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, oxybis(2,1-ethanediylloxy-2,1-ethanediyl) ester, polymer with [(heptadecafluorooctyl)sulfonyl]propylamino]methyl 2-propenoate, methyl 2-methyl-2-propenoate, methyloxirane polymer with oxirane 2-methyl-2-propenoate and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate, graft (9CI) (CA INDEX NAME)

CM 1

CRN 94422-64-7

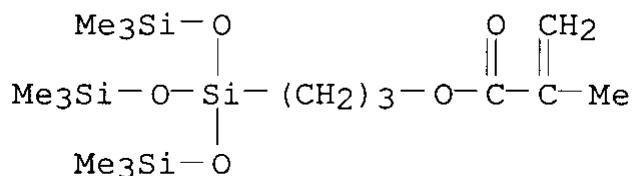
CMF C15 H12 F17 N O4 S



CM 2

CRN 17096-07-0

CMF C16 H38 O5 Si4

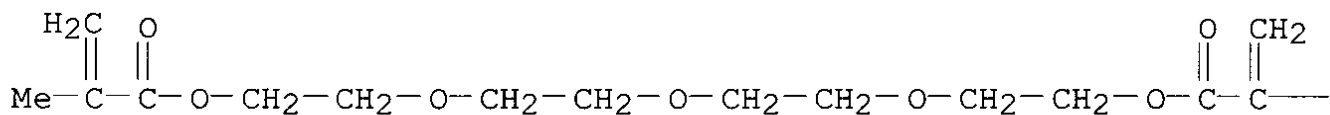


CM 3

CRN 109-17-1

CMF C16 H26 O7

PAGE 1-A



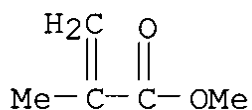
PAGE 1-B

—Me

CM 4

CRN 80-62-6

CMF C5 H8 O2



CM 5

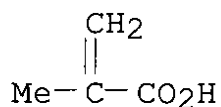
CRN 58916-75-9

CMF C4 H6 O2 . (C3 H6 O . C2 H4 O)x

CM 6

CRN 79-41-4

CMF C4 H6 O2



CM 7

CRN 9003-11-6

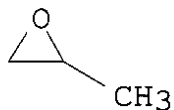
CMF (C3 H6 O . C2 H4 O)x

CCI PMS

CM 8

CRN 75-56-9

CMF C3 H6 O



CM 9

CRN 75-21-8

CMF C2 H4 O



- IC ICM G03F007-027  
ICS G03F007-038; G03F007-075; H01L021-027
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST **photoresist** fluoroalkyl acrylate graft copolymer; silicone ethylenic graft copolymer **photoresist**
- IT Polysiloxanes, preparation  
(acrylic, graft; **photoresist** compn. contg. copolymer of fluoroalkyl (meth)acrylate and silicone-contg. ethylenic compd.)
- IT Polyoxyalkylenes, preparation  
(acrylic, siloxanes, graft; **photoresist** compn. contg. copolymer of fluoroalkyl (meth)acrylate and silicone-contg. ethylenic compd.)

IT **Photoresists**

(**photoresist** compn. contg. copolymer of fluoroalkyl  
(meth)acrylate and silicone-contg. ethylenic compd.)

IT 188979-82-0P 188979-83-1P 188980-15-6P 188980-17-8P

189084-82-0P 189084-83-1P 189084-86-4P **189084-87-5P**

(**photoresist** compn. contg. copolymer of fluoroalkyl  
(meth)acrylate and silicone-contg. ethylenic compd.)

L56 ANSWER 16 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN

1997:178814 Document No. 126:175758 Shelf-stable aqueous oil- and waterproofing compositions for masonry, water-soluble fluoropolymers for the compositions, and porous substrates treated with the compositions. Linert, Jeffrey G.; Savu, Patricia M. (Minnesota Mining and Manufacturing Co., USA). PCT Int. Appl. WO 9700230 A1 19970103, 40 pp. DESIGNATED STATES: W: CA, JP; RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 1996-US6313 19960503. PRIORITY: US 1995-491232 19950616.

AB The compns. contain  $\geq 1$  of (a) monomers selected from acrylate, methacrylate, acrylamide, methylacrylamide, thioacrylate, and meththioacrylate compds., all contg. a fluoroaliph. moiety linked to the residue of the compd. through a divalent org. linking group, (b) monomers selected from acrylic acid, methacrylic acid, carboxyalkylacrylate, and carboxyalkylmethacrylate compds., and (c) monomers selected from acrylate, methacrylate, acrylamide, methacrylamide, thioacrylate, and meththioacrylate compds., all contg. an oxyalkylene or polyoxyalkylene group linked to the residue of the compd. through an O, S, or N atom, as presented with general formulas. These aq. solns. or dispersions eliminate the need for environmentally harmful and toxic co-solvents. When applied to masonry and other siliceous materials, these solns. or dispersions can react with the substrate onto which they are applied to form an invisible and water-sol. coating that repels both water and oil, **resists** soiling, and cannot be easily washed off from the surface of the substrate. Substrates treated with these polymers are thereby durably protected from rain and normal weathering.

IT **187100-65-8P 187149-48-0P 187149-50-4P****187149-52-6P 187149-55-9P**

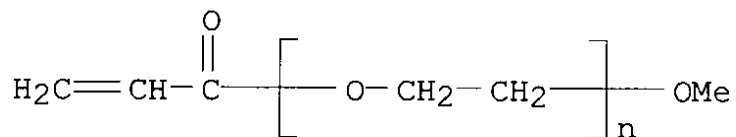
(shelf-stable aq. fluoroacrylic oil- and waterproofing compns.  
for porous masonry)

RN 187100-65-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester,  
polymer with 2-[[heptadecafluorooctyl)sulfonyl]methylamino]ethyl  
2-propenoate,  $\alpha$ -(1-oxo-2-propenyl)- $\omega$ -methoxypoly(oxy-1,2-  
ethanediyl) and 2-propenoic acid (9CI) (CA INDEX NAME)

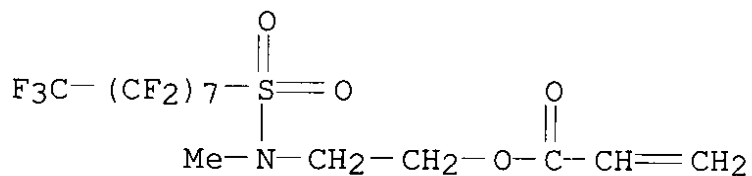
CM 1

CRN 32171-39-4  
 CMF (C2 H4 O)<sub>n</sub> C4 H6 O2  
 CCI PMS



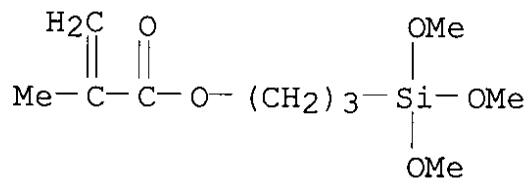
CM 2

CRN 25268-77-3  
 CMF C14 H10 F17 N O4 S



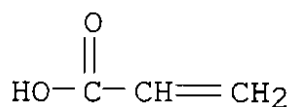
CM 3

CRN 2530-85-0  
 CMF C10 H20 O5 Si



CM 4

CRN 79-10-7  
 CMF C3 H4 O2



.RN 187149-48-0 HCAPLUS

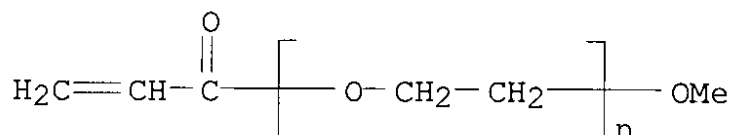
CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with 2-[[ (heptadecafluorooctyl)sulfonyl]methylamino]ethyl 2-propenoate and  $\alpha$ -(1-oxo-2-propenyl)- $\omega$ -methoxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 32171-39-4

CMF (C2 H4 O)<sub>n</sub> C4 H6 O2

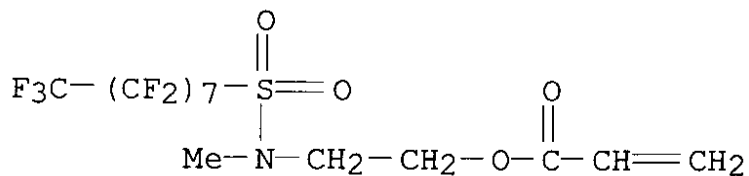
CCI PMS



CM 2

CRN 25268-77-3

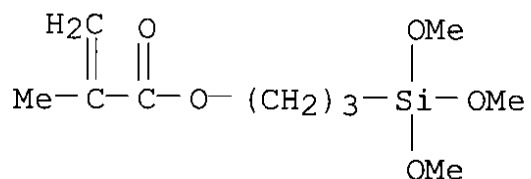
CMF C14 H10 F17 N O4 S



CM 3

CRN 2530-85-0

CMF C10 H20 O5 Si



RN 187149-50-4 HCAPLUS

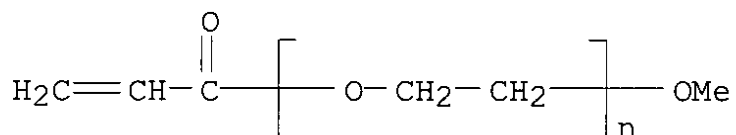
CN 2-Propenoic acid, polymer with 2-[[ (heptadecafluorooctyl) sulfonyl] methylamino]ethyl 2-propenoate,  $\alpha$ -(1-oxo-2-propenyl)- $\omega$ -methoxypoly(oxy-1,2-ethanediyl) and 3-(trimethoxysilyl)-1-propanethiol (9CI) (CA INDEX NAME)

CM 1

CRN 32171-39-4

CMF (C2 H4 O)<sub>n</sub> C4 H6 O2

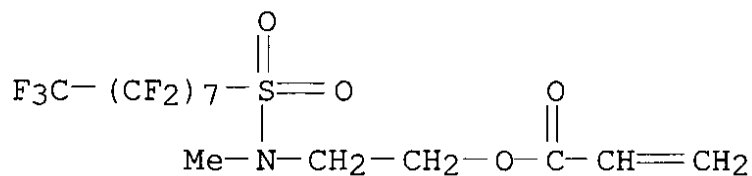
CCI PMS



CM 2

CRN 25268-77-3

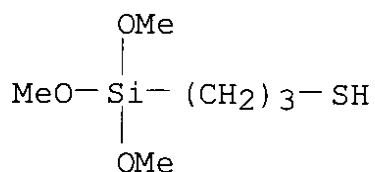
CMF C14 H10 F17 N O4 S



CM 3

CRN 4420-74-0

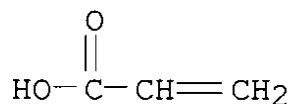
CMF C6 H16 O3 S Si



CM 4

CRN 79-10-7

CMF C3 H4 O2



RN 187149-52-6 HCAPLUS

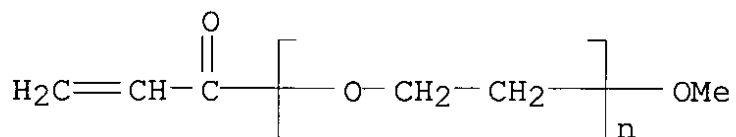
CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester, polymer with 2-[[ (heptadecafluorooctyl)sulfonyl]methylamino]ethyl 2-propenoate,  $\alpha$ -(1-oxo-2-propenyl)- $\omega$ -methoxypoly(oxy-1,2-ethanediyl), 2-propenoic acid and 3-(trimethoxysilyl)-1-propanethiol (9CI) (CA INDEX NAME)

CM 1

CRN 32171-39-4

CMF (C2 H4 O)<sub>n</sub> C4 H6 O2

CCI PMS

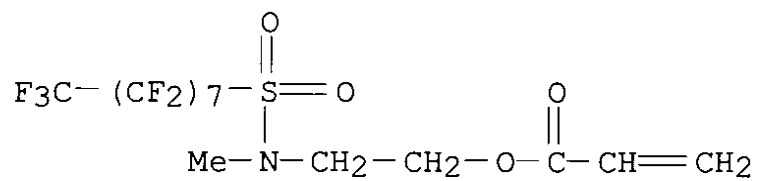


CM 2

CRN 25268-77-3

CMF C14 H10 F17 N O4 S

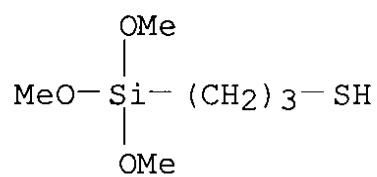




CM 3

CRN 4420-74-0

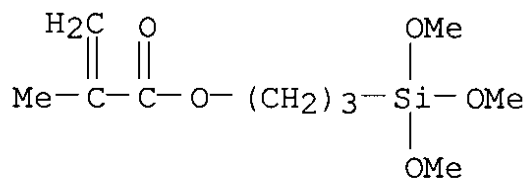
CMF C6 H16 O3 S Si



CM 4

CRN 2530-85-0

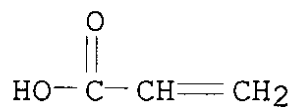
CMF C10 H20 O5 Si



CM 5

CRN 79-10-7

CMF C3 H4 O2

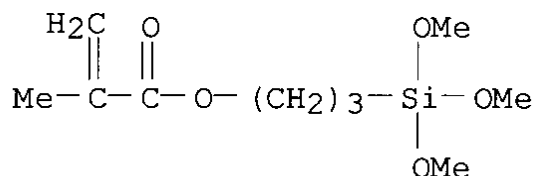




CM 4

CRN 2530-85-0

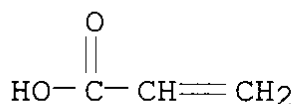
CMF C10 H20 O5 Si



CM 5

CRN 79-10-7

CMF C3 H4 O2



IC ICM C04B041-48

ICS C04B041-49

CC 58-3 (Cement, Concrete, and Related Building Materials)

IT 187100-65-8P 187149-48-0P 187149-50-4P

187149-52-6P 187149-54-8P 187149-55-9P

(shelf-stable aq. fluoroacrylic oil- and waterproofing compns.  
for porous masonry)

L56 ANSWER 17 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN

1994:641832 Document No. 121:241832 High resolution positively working  
**resist** composition and patterning. Namiki, Takahisa; Yano,  
Ei; Watabe, Keiji; Igarashi, Yoshikazu (Fujitsu Ltd, Japan). Jpn.  
Kokai Tokkyo Koho JP 06130668 A2 19940513 Heisei, 4 pp. (Japanese).  
CODEN: JKXXAF. APPLICATION: JP 1992-282987 19921021.

AB Claimed are (1) a **resist** compn. contg. alkali-sol. matrix  
resin and an agent releasing an alk. compd. under ionizing  
radiation, and (2) patterning by forming a **resist** film by  
the compn., irradiating ionizing radiation, and developing by water  
or aq. alk. The compn., e.g., [Co(NH<sub>2</sub>Me)<sub>5</sub>Br (ClO<sub>4</sub>)<sub>2</sub>] and a cresol  
novolak, is useful for manuf. of large-scale integrated  
semiconductor device.

IC ICM G03F007-039

ICS G03F007-004; G03F007-30; H01L021-027

- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 76
- ST high resolu pos working **photoresist**; alkali sol matrix resin **photoresist**; ionizing radiation **resist**; alk compd releasing compd **photoresist**; cobalt amine complex **photoresist**; benzyl carbamate **photoresist**; **sulfonamide** alkali releasing compd **photoresist**
- IT **Siloxanes** and **Silicones**, uses  
(acrylphenyl-substituted, pos.-working ionizing radiation **resist** contg. alk. compd.-releasing agent and)
- IT Phenolic resins, uses  
(novolak, cresol-based, pos.-working ionizing radiation **resist** contg. alk. compd.-releasing agent and)
- IT **Resists**  
(photo-, pos.-working, alkali-sol. matrix resin and alk. compd.-releasing compd. for)
- IT 24979-70-2, Poly(p-hydroxystyrene)  
(pos.-working ionizing radiation **resist** contg. alk. compd.-releasing agent and)
- IT 80-30-8, N-Cyclohexyl-4-methylphenylsulfonamide  
61160-95-0 158325-31-6  
(pos.-working ionizing radiation **resist** contg. alkali-sol. resin and)
- L56 ANSWER 18 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN  
1983:480064 Document No. 99:80064 Photopolymerizable recording composition suitable for producing **photoresist** layers.  
Barzynski, Helmut; Eckell, Albrecht; Elzer, Albert; Klinmann, Uwe; Leyrer, Reinhold J.; Sanner, Axel (BASF A.-G., Fed. Rep. Ger.).  
Eur. Pat. Appl. EP 71789 A1 19830216, 36 pp. DESIGNATED STATES: R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE. (German). CODEN: EPXXDW.  
APPLICATION: EP 1982-106331 19820715. PRIORITY: DE 1981-3131448 19810807.
- AB **Photoresist** compns. having excellent adhesion to metal supports are composed of  $\geq 1$  photopolymerizable, ethylenically unsatd., low-mol. wt. compd.,  $\geq 1$  photoinitiator, the usual additives and/or aids (optional), and  $\geq 1$  binder from a vinyl polymer contg. incorporated amino and/or imino groups. Thus, a soln. contg. a 2-dimethylaminoethyl methacrylate-Me methacrylate copolymer (3:97%; mol. wt. 180,000) 53, trimethylolpropane triacrylate 33.8, 4,4'-bis(dimethylamino)benzophenone 0.28, benzophenone 3.0, N-nitrosodiphenylamine 0.012, crystal violet 0.008, crystal violet leuco base 0.6, **silicone** oil 0.1, 2,5-dichloro-1,4-bis(dichloromethyl)benzene 2.0, p-toluenesulfonamide 7.2 parts, and sufficient EtOAc to give 27% solids. After filtering, the soln. was coated on a temporary polyester support, dried to give a 48  $\mu$  thick layer, and then a

low-pressure polyethylene film added thereto give a dry film **resist** material. This polyethylene film on this material was then stripped off and the material laminated to a Cu-laminated plate at 110° and 1 m/min. The adhesion between the **photoresist** layer and the temporary polyester support was 156 p/2 cm and the adhesion between the **photoresist** layer and the Cu surface was 784 p/2 cm.

- IC G03C001-70; G03C001-76; G03C001-90; G03F007-26; G03F007-10; C08L033-14; C08L033-24; C08F008-32; C08F220-34; C08F220-60
- ICA H05K003-06
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST vinyl polymer binder **photoresist** adhesion; acrylic polymer binder **photoresist** adhesion
- IT Acrylic polymers, uses and miscellaneous  
(amino or imino group-contg., **photoresist** compns. contg. binders of, for improved adhesion)
- IT Photochromic substances  
**Siloxanes** and **Silicones**, uses and miscellaneous  
(**photoresist** compns. contg. vinyl polymer binder and, for improved adhesion)
- IT Vinyl compounds, polymers  
(polymers, amino or imino group-contg., **photoresist** compns. contg. binders of, with improved adhesion)
- IT **Resists**  
(photo-, with binders from vinyl polymers contg. amino or imino groups for improved adhesion)
- IT 79-10-7D, esters, polymers 79-41-4D, esters, polymers  
(**photoresist** compns. contg. binders of, for improved adhesion)
- IT 70-55-3 86-30-6 90-94-8 109-17-1 119-61-9, uses and miscellaneous 467-63-0 548-62-9 2478-10-6D, reaction products with polyoxybutylene and toluene diisocyanate 15625-89-5 25322-25-2 26471-62-5D, reaction products with butanediol monoacrylate and polyoxybutylene 41999-84-2 51160-98-6D, reaction products with butanediol monoacrylate and toluene diisocyanate  
(**photoresist** compns. contg. vinyl polymer binder and, for improved adhesion)
- IT 82901-45-9 86710-45-4  
(**photoresist** compns. contg., for improved adhesion)
- IT 26222-42-4  
(**photoresist** compns. contg., with improved adhesion)

L56 ANSWER 19 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN  
1974:126807 Document No. 80:126807 **Photoresist** compositions containing diazoquinone **siloxanes**. Lazarus, Sam; Turner, Edwin John (Phillip A. Hunt Chemical Corp.). Ger. Offen. DE 2312499

19731206, 19 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1973-2312499 19730313.

- AB **Photoresist** compns. with increased adhesion to SiO<sub>2</sub> surfaces in aq. etching solns. are obtained by adding to a light-sensitive phenolic resin compn. a compd. RXCH<sub>2</sub>Si(OR<sub>1</sub>)<sub>3</sub> (I; R = arom. diazoquinone, R<sub>1</sub> = lower alkyl; and X = SO<sub>2</sub>NH). Examples of I are 1-[2-diazo-1-naphthol-5(6)-**sulfonamido**]-3-(triethoxysilyl)-propane, 1-[2-diazo-1-naphthol-5(6)-**sulfonamido**]-2-(trimethoxysilylpropyl)ethane and 1-[methylpropionyl-1-2(2-diazo-1-naphthol-5(6)-**sulfonamido**)-3-(trimethoxysilyl)propane].
- IC C07F; G03F
- CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic Processes)
- ST diazoquinone **siloxane** adhesive **photoresist**; silica **photoresist** etch resistant
- IT **Resists**  
(photo-, **siloxane** adhesion promoters for, on silica)
- IT Phenolic resins  
(reaction products, with (diazonaphtholsulfonamido) (triethoxysilyl)propane, **photoresists** contg.)
- IT **Siloxanes** and **Silicones**, compounds  
(reaction products, with phenolic resins, **photoresist** adhesion improvement by)
- IT 1-Naphthalenesulfonyl chloride, 6-diazo-5,6-dihydro-5-oxo-, reaction products with nonylphenol-phenol-formaldehyde polymers  
Phenol, polymer with formaldehyde and nonylphenol, reaction products with diazonaphtholsulfonyl chloride  
Phenol, nonyl-, polymer with formaldehyde and phenol, reaction products with diazonaphtholsulfonyl chloride  
(**photoresists** contg., improved adhesion to silica by)
- IT 7631-86-9, properties  
(adhesion of, to **photoresists**, **siloxane** improvement of)
- IT 52505-87-0  
(**photoresists** compn. contg., improved adhesion to silica by)
- IT 9003-35-4 25086-15-1 52749-39-0  
(**photoresists** contg. diazoquinone **siloxanes** and, for silica surfaces)

L56 ANSWER 20 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN  
1974:121507 Document No. 80:121507 Light-sensitive polymers. Wolff, Erich (Agfa-Gevaert A.-G.). Ger. Offen. DE 2217744 19731018, 13 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1972-2217744 19720413.

- AB **Photoresists** having improved adhesion to oxidized silicon [7440-21-3] semiconductors contain functional silane substituents. Thus, dropwise addn. of hydroxypropyl methacrylate 289.5, Sn

octanoate 1, and MeOC<sub>2</sub>H<sub>4</sub>OAc 236 parts to 400 parts p-toluenesulfonyl isocyanate and 800 parts MeOC<sub>2</sub>H<sub>4</sub>OAc, stirring 10 hr at 45.deg., and stirring this soln. 500, 3-(triethoxysilyl)propyl methacrylate 8.5, and azobisisobutyronitrile 2 parts 5 hr at 65.deg. and 10 hr at 75.deg. gives a 40% soln. of hydroxypropyl methacrylate-3-(triethoxysilyl)propyl methacrylate-p-toluenesulfonyl isocyanate copolymer (I) [51293-70-0]. Oxidized Si with an 0.8  $\mu$  coating of I contg. 2% diaziodibenzalcylohexanone, illuminated with an Hg lamp, solvent-developed, and etched in NH<sub>4</sub>F-HF soln. shows excellent image clarity.

IT 51293-70-0

(photoresists, with improved adhesion to oxidized silicon semiconductors)

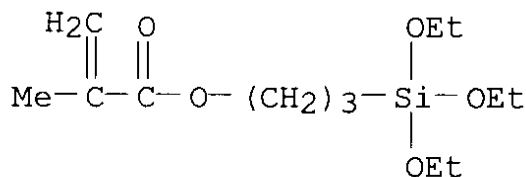
RN 51293-70-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, monoester with 1,2-propanediol, polymer with 4-methylbenzenesulfonyl isocyanate and 3-(triethoxysilyl)propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 21142-29-0

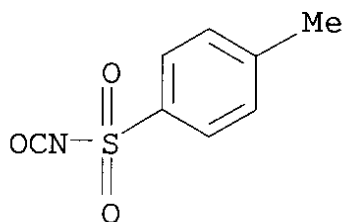
CMF C13 H26 O5 Si



CM 2

CRN 4083-64-1

CMF C8 H7 N O3 S



CM 3

CRN 27813-02-1

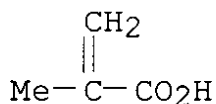
CMF C7 H12 O3

CCI IDS

CM 4

CRN 79-41-4

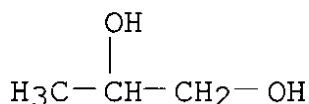
CMF C4 H6 O2



CM 5

CRN 57-55-6

CMF C3 H8 O2



IC G03C

CC 35-3 (Synthetic High Polymers)

Section cross-reference(s): 71

ST adhesion **photoresist** silicon; semiconductor silicon**photoresist**; silylpropyl methacrylate **photoresist**

IT Adhesion

(of oxidized silicon semiconductors, to **photoresists**)IT **Resists**

(photo-, with improved adhesion to oxidized silicon semiconductors)

IT Semiconductor materials

(silicon, **photoresists** with improved adhesion to)

IT Silicon, oxidized, uses and miscellaneous

(semiconductors, **photoresists** with improved adhesion to)IT **51293-70-0** 52292-16-7

(photoresists, with improved adhesion to oxidized silicon semiconductors)



- L56 ANSWER 21 OF 21 HCAPLUS COPYRIGHT 2004 ACS on STN  
1965:414331 Document No. 63:14331 Original Reference No. 63:2522f-h  
Photoelectric resistances and cells with increased sensitivity at  
short wavelength. Weisbeck, Roland; Brockes, Andreas  
(Farbenfabriken Bayer A.-G.). DE 1190118 19650401, 6 pp.  
(Unavailable). APPLICATION: DE 19631122.
- AB Photo-semiconductive material (Si, Se, or chalcogenides of Zn or Cd)  
is covered with one or more transparent layers, each contg. one or  
more fluorescent dyes (concn. 0.01-2%). The carrier layers (2.5-100  
μ thick) consist of epoxy or **silicone** resin, polyester  
or cellulose acetate. The layer with the absorption max. at the  
longest wavelength is closest to the semiconductor. Fluorescent  
dyes used are Na salicylate, 1-(p-sulfamoylphenyl)-3-(p-  
chlorophenyl)pyrazoline, 3 - [(2-chloro-4-diethylamino-6-  
triazinylamino)phenyl] coumarin, 3-phenyl-7-(2-chloro-4-diethylamino-  
6-triazinyl)coumarin, the condensation product of 1 mol  
terephthalaldehyde + 2 mol Et cyanoacetate, 4-amino-1,8-naphthal-p-  
xenyliumide, 1-phenyl-3-styrylpyrazoline, 2,2'-dihydroxy-α-  
naphthalaldazine, 2,2'-dihydroxybenzaldazine salicylaldazine, Et ester  
of m-monoethylaminophenolphthalein-HCl, anthrapyrimidine, and the  
condensation product of 1 mol perylenetetracarboxylic acid + 2 mol  
4,5-dichloro-o-toluidine and(or) m-diethylaminophenolphthalein-HCl.
- IC H01L  
CC 9 (Electric and Magnetic Phenomena)  
IT Coating(s)  
(of photoelec. cells or **photoresistors** from  
chalcogenides of Cd or Zn, Se or Si, with fluorescent substances)
- IT Benzo[e]perimidine  
(cadmium selenide-CdS **photoresistor** coated with  
7-[4-chloro-6-(diethylamino)-s-triazin-2-yl]-3-Ph,  
1-phenyl-3-styryl-2-pyrazoline and)
- IT 7440-50-8, Copper  
(Cadmium selenide, :CdS or their solid solns. doped with,  
photoelec. cells and **photoresistors** from, contg. layers  
of fluorescent substances)
- IT 7782-50-5, Chlorine  
(CdS or their mixts. doped with, photoelec. cells and  
**photoresistors** from, contg. layers of fluorescent  
substances)
- IT 2744-50-5, 3,9-Perylenedicarboxylic acid, diisobutyl ester  
(CdS-ZnS **photoresistor** coated with p-[3-(p-chlorophenyl-  
2-pyrazolin-1-yl)]**benzenesulfonamide**,  
2-hydroxy-1-naphthaldehyde azine)
- IT 2387-03-3, 1-Naphthaldehyde, 2-hydroxy-, azine  
(CdS-ZnS **photoresistor** coated with p-[3-(p-chlorophenyl-  
2-pyrazolin-1-yl)]**benzenesulfonamide**,  
3,9-perylenecarboxylic acid, diiso-Bu ester)
- IT 1306-24-7, Cadmium selenide

- (and mixts. with CdS, photoelec. cells and **photoresistors** from, contg. layers of fluorescent substances)
- IT 1306-23-6, Cadmium sulfide  
(and mixts. with CdSe, photoelec. cells and **photoresistors** from, contg. layers of fluorescent substances)
- IT 31134-62-0, Coumarin, 3-[[[4-chloro-6-(diethylamino)-s-triazin-2-yl]amino]phenyl]-  
(cadmium selenide **photoresistor** coated with lacquer contg.)
- IT 2387-04-4, 2-Pyrazoline, 1-phenyl-3-styryl-  
(cadmium selenide-CdS **photoresistor** coated with benzo[e]perimidine, 7-[2'-chloro-4'-(diethylamino)-s-triazin-2-yl]-3-phenyl-coumarin and)
- IT 2744-51-6, Coumarin, 7-[4-chloro-6-(diethylamino)-s-triazin-2-yl]-3-phenyl-  
(cadmium selenide-CdS **photoresistor** coated with benzo[e]perimidine,, 1-phenyl-3-styryl-2-pyrazoline and)
- IT 1314-98-3, Zinc sulfide  
(cadmium sulfide contg., photoelec. cells and **photoresistors** from, coated with p-[3-(p-chlorophenyl)-2-pyrazolin-1-yl]-**benenesulfonamide**, 2-hydroxy-1-naphthaldehyde azine and 3,9-perylenedicarboxylic acid diiso-Bu ester)
- IT 2744-49-2, **Benzenesulfonamide**, p-[3-(p-chlorophenyl)-2-pyrazolin-1-yl]-  
(cadmium sulfide-ZnS **photoresistor** and Se photoelec. cell coated with)
- IT 81-32-3, 3,4,9,10-Perylenetetracarboxylic acid  
(reaction product with 4,5-dichloro-o-toluidine, CdSe **photoresistor** coated with resin contg.)
- IT 623-27-8, Terephthalaldehyde  
(reaction product with cyanoacetic acid Et ester and salicylaldehyde azine, CdSe **photoresistor** coated with resin contg.)
- IT 959-36-4, Salicylaldehyde, azine  
(reaction product with cyanoacetic acid Et ester and terephthalaldehyde, CdSe **photoresistor** coated with resin contg.)
- IT 2387-08-8, o-Toluidine, 4,5-dichloro-  
(reaction product with perylenetetracarboxylic acid, CdSe **photoresistor** coated with resin contg.)
- IT 105-56-6, Acetic acid, cyano-, ethyl ester  
(reaction product with salicylaldehyde azine and terephthalaldehyde CdSe **photoresistor** coated with resin contg.)

=> d 157 1-17 cbib abs hitstr hitind

L57 ANSWER 1 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN  
 2003:1007692 Document No. 140:50319 Photoacid generating compounds,  
 chemically amplified positive **resist** materials, and  
 pattern forming method. Hatakeyama, Jun; Kobayashi, Tomohiro;  
 Ohsawa, Youichi (Japan). U.S. Pat. Appl. Publ. US 2003235779 A1  
 20031225, 47 pp., Cont.-in-part of U.S. Pat. Appl. 2003 207,201.  
 (English). CODEN: USXXCO. APPLICATION: US 2003-375773 20030227.  
 PRIORITY: JP 2001-397192 20011227; US 2002-331785 20021227.

AB The invention provides a high-resoln. **resist** material  
 comprising an acid generator that has high sensitivity and high  
 resoln. with respect to high-energy rays of 300 nm or less, has  
 small line-edge roughness, and is superior in heat stability and in  
 shelf stability, and provides a pattern forming method that uses  
 this **resist** material. The invention further provides a  
 chem. amplified pos. **resist** material comprising a base  
 resin, an acid generator and a solvent in which the acid generator  
 generates an alkyylimidic acid contg. a fluorine group, and provides  
 a pattern forming method comprising a step of applying the  
**resist** material to the substrate, a step of performing  
 exposure to a high-energy ray of a wavelength of 300 nm or less  
 through a **photomask** following heat treatment, and a step  
 of performing development by a developing soln. following heat  
 treatment.

IT 601520-40-5P 635715-30-9P

(photoacid generating compds. for chem. amplified pos.  
**resist** materials)

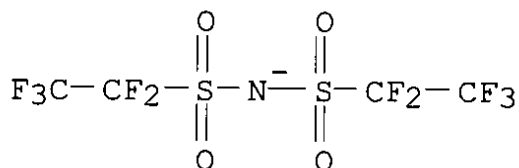
RN 601520-40-5 HCAPLUS

CN Thiophenium, tetrahydro-1-(2-oxo-2-phenylethyl)-, salt with  
 1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl]ethanesulfonamid  
 e (1:1) (9CI) (CA INDEX NAME)

CM 1

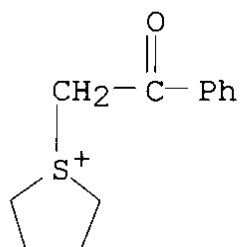
CRN 129318-46-3

CMF C4 F10 N O4 S2



CM 2

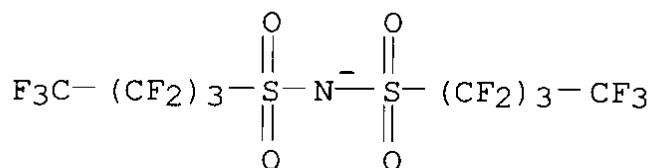
CRN 58162-29-1  
CMF C12 H15 O S



RN 635715-30-9 HCAPLUS  
CN Thiophenium, tetrahydro-1-(2-oxo-2-phenylethyl)-, salt with  
1,1,2,2,3,3,4,4,4-nonafluoro-N-[(nonafluorobutyl)sulfonyl]-1-  
butanesulfonamide (1:1) (9CI) (CA INDEX NAME)

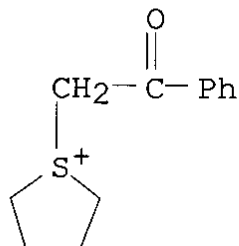
CM 1

CRN 191101-38-9  
CMF C8 F18 N O4 S2



CM 2

CRN 58162-29-1  
CMF C12 H15 O S



IT 460731-17-3 460731-18-4 541547-03-9  
 601520-33-6 601520-34-7 601520-36-9  
 601520-37-0 601520-39-2 601520-43-8  
 601520-45-0 601520-47-2 601520-49-4  
 601520-51-8

(photoacid generating compds. for chem. amplified pos.  
**resist** materials)

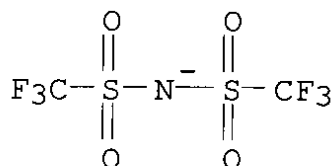
RN 460731-17-3 HCAPLUS

CN Sulfonium, triphenyl-, salt with 1,1,1-trifluoro-N-  
 [(trifluoromethyl)sulfonyl]methanesulfonamide (1:1) (9CI) (CA INDEX  
 NAME)

CM 1

CRN 98837-98-0

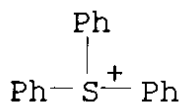
CMF C2 F6 N O4 S2



CM 2

CRN 18393-55-0

CMF C18 H15 S



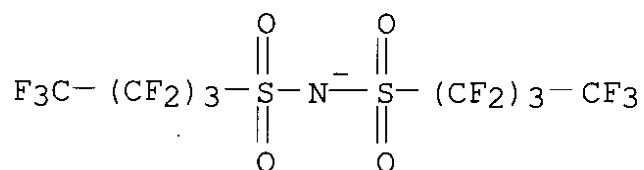
RN 460731-18-4 HCAPLUS

CN Sulfonium, triphenyl-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-N-  
 [(nonafluorobutyl)sulfonyl]-1-butanesulfonamide (1:1) (9CI) (CA  
 INDEX NAME)

CM 1

CRN 191101-38-9

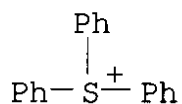
CMF C8 F18 N O4 S2



CM 2

CRN 18393-55-0

CMF C18 H15 S



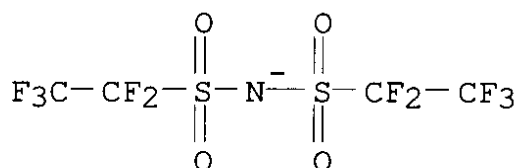
RN 541547-03-9 HCAPLUS

CN Sulfonium, triphenyl-, salt with 1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl]ethanesulfonamide (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 129318-46-3

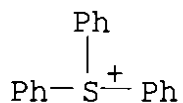
CMF C4 F10 N O4 S2



CM 2

CRN 18393-55-0

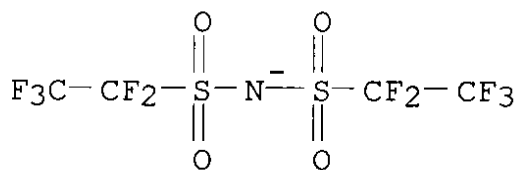
CMF C18 H15 S



RN 601520-33-6 HCAPLUS  
 CN Sulfonium, cyclopropyldiphenyl-, salt with 1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl]ethanesulfonamide (1:1) (9CI) (CA INDEX NAME)

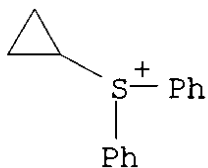
CM 1

CRN 129318-46-3  
 CMF C4 F10 N O4 S2



CM 2

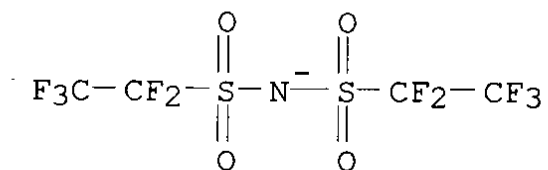
CRN 46489-36-5  
 CMF C15 H15 S



RN 601520-34-7 HCAPLUS  
 CN Sulfonium, dimethylphenyl-, salt with 1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl]ethanesulfonamide (1:1) (9CI) (CA INDEX NAME)

CM 1

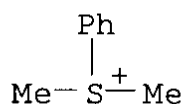
CRN 129318-46-3  
 CMF C4 F10 N O4 S2



CM 2

CRN 45694-57-3

CMF C8 H11 S



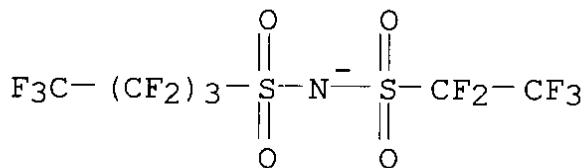
RN 601520-36-9 HCAPLUS

CN Sulfonium, triphenyl-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-N-[(pentafluoroethyl)sulfonyl]-1-butanesulfonamide (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 601520-35-8

CMF C6 F14 N O4 S2

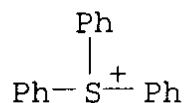


CM 2

CRN 18393-55-0

CMF C18 H15 S





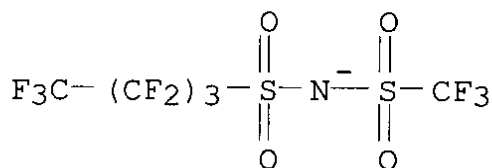
RN 601520-37-0 HCAPLUS

CN Sulfonium, triphenyl-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-N-[(trifluoromethyl)sulfonyl]-1-butanefulfonamide (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 230627-60-8

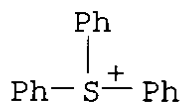
CMF C5 F12 N O4 S2



CM 2

CRN 18393-55-0

CMF C18 H15 S



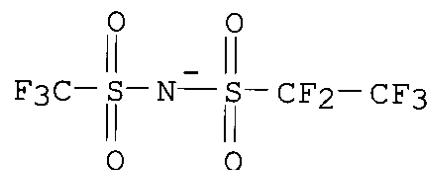
RN 601520-39-2 HCAPLUS

CN Sulfonium, triphenyl-, salt with 1,1,2,2,2-pentafluoro-N-[(trifluoromethyl)sulfonyl]ethanesulfonamide (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 601520-38-1

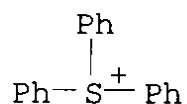
CMF C3 F8 N O4 S2



CM 2

CRN 18393-55-0

CMF C18 H15 S



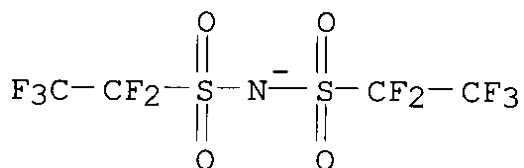
RN 601520-43-8 HCAPLUS

CN 2H-Thiopyranium, tetrahydro-1-(2-oxo-2-phenylethyl)-, salt with  
1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl]ethanesulfonamid  
e (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 129318-46-3

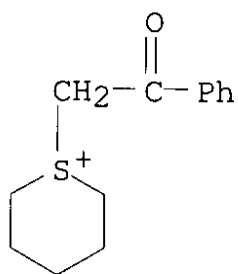
CMF C4 F10 N O4 S2



CM 2

CRN 71967-56-1

CMF C13 H17 O S



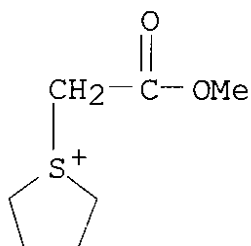
RN 601520-45-0 HCAPLUS

CN Thiophenium, tetrahydro-1-(2-methoxy-2-oxoethyl)-, salt with  
1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl]ethanesulfonamid  
e (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 601520-44-9

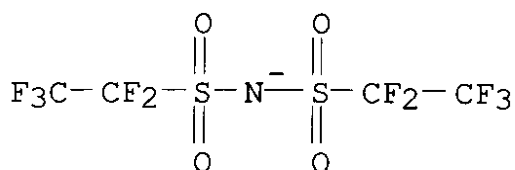
CMF C7 H13 O2 S



CM 2

CRN 129318-46-3

CMF C4 F10 N O4 S2



RN 601520-47-2 HCAPLUS

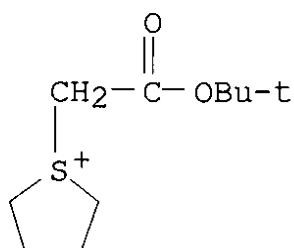
CN Thiophenium, 1-[2-(1,1-dimethylethoxy)-2-oxoethyl]tetrahydro-, salt  
with 1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl]ethanesulfo

namide (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 601520-46-1

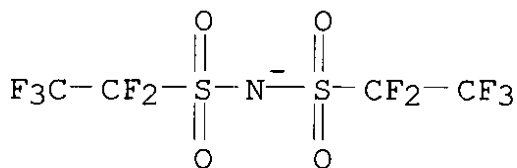
CMF C10 H19 O2 S



CM 2

CRN 129318-46-3

CMF C4 F10 N O4 S2



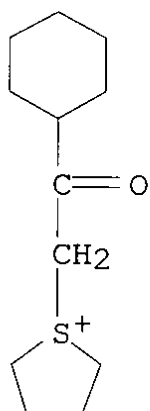
RN 601520-49-4 HCAPLUS

CN Thiophenium, 1-(2-cyclohexyl-2-oxoethyl)tetrahydro-, salt with 1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl]ethanesulfonamide (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 601520-48-3

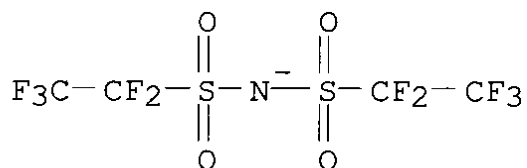
CMF C12 H21 O S



CM 2

CRN 129318-46-3

CMF C4 F10 N O4 S2



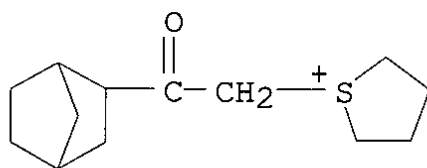
RN 601520-51-8 HCAPLUS

CN Thiophenium, 1-(2-bicyclo[2.2.1]hept-2-yl-2-oxoethyl)tetrahydro-,  
salt with 1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl]ethane  
sulfonamide (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 601520-50-7

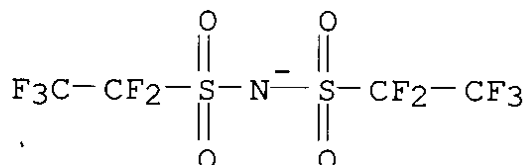
CMF C13 H21 O S



CM 2

CRN 129318-46-3

CMF C4 F10 N O4 S2

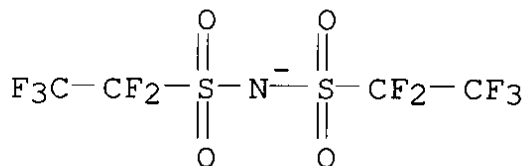


IT 129318-46-3, Bis(perfluoroethylsulfonyl)imide  
191101-38-9

(prepn. of photoacid generating compds. for chem. amplified pos.  
**resist** materials)

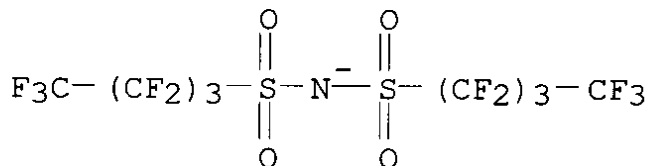
RN 129318-46-3 HCAPLUS

CN Ethanesulfonamide, 1,1,2,2,2-pentafluoro-N-  
[(pentafluoroethyl)sulfonyl]-, ion(1-) (9CI) (CA INDEX NAME)



RN 191101-38-9 HCAPLUS

CN 1-Butanesulfonamide, 1,1,2,2,3,3,4,4,4-nonafluoro-N-  
[(nonafluorobutyl)sulfonyl]-, ion(1-) (9CI) (CA INDEX NAME)



IT 601520-62-1 635715-35-4 635715-36-5  
635715-38-7 635715-39-8

(resin; chem. amplified pos. **resist** materials contg.)

RN 601520-62-1 HCAPLUS

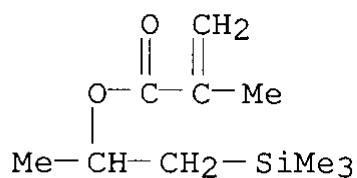
CN 2-Propenoic acid, 2-methyl-, 1-methyl-2-(trimethylsilyl)ethyl ester,  
polymer with 2,5-furandione and 3-[3,3,3-trimethyl-1,1-  
bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate

(9CI) (CA INDEX NAME)

CM 1

CRN 409320-43-0

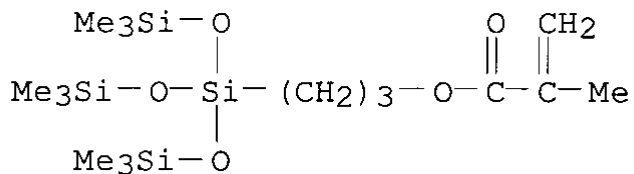
CMF C10 H20 O2 Si



CM 2

CRN 17096-07-0

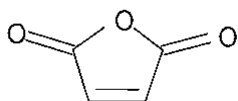
CMF C16 H38 O5 Si4



CM 3

CRN 108-31-6

CMF C4 H2 O3



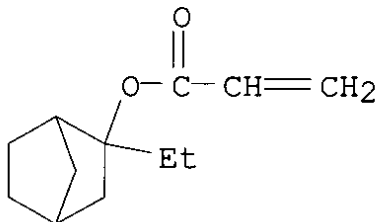
RN 635715-35-4 HCAPLUS

CN 2-Propenoic acid, 2-ethylbicyclo[2.2.1]hept-2-yl ester, polymer with ethenylpentamethyldisiloxane and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 449173-03-9

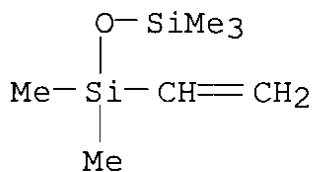
CMF C12 H18 O2



CM 2

CRN 1438-79-5

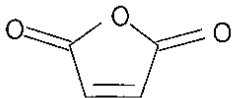
CMF C7 H18 O Si2



CM 3

CRN 108-31-6

CMF C4 H2 O3



RN 635715-36-5 HCAPLUS

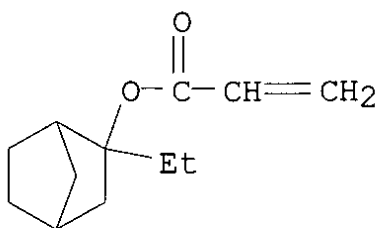
CN 2-Propenoic acid, 2-ethylbicyclo[2.2.1]hept-2-yl ester, polymer with ethenylheptamethylcyclotetrasiloxane and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 449173-03-9

CMF C12 H18 O2

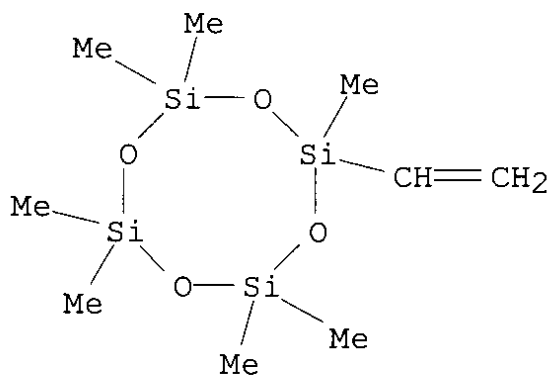




CM 2

CRN 3763-39-1

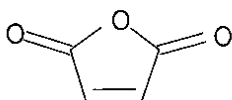
CMF C9 H24 O4 Si4



CM 3

CRN 108-31-6

CMF C4 H2 O3



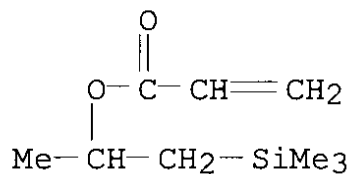
RN 635715-38-7 HCAPLUS

CN 2-Propenoic acid, 1-methyl-2-(trimethylsilyl)ethyl ester, polymer  
with ethenylheptamethylcyclotetrasiloxane and 2,5-furandione (9CI)  
(CA INDEX NAME)

CM 1

CRN 635715-37-6

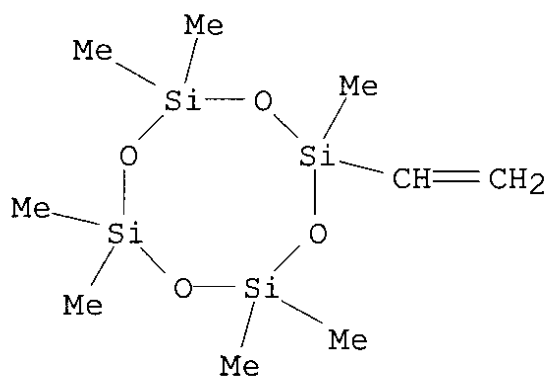
CMF C9 H18 O2 Si



CM 2

CRN 3763-39-1

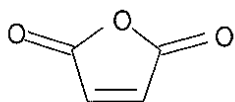
CMF C9 H24 O4 Si4



CM 3

CRN 108-31-6

CMF C4 H2 O3



RN 635715-39-8 HCAPLUS

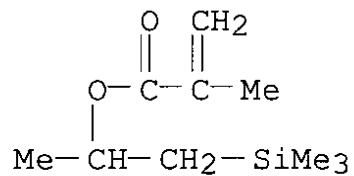
CN 2-Propenoic acid, 2-methyl-, 3-(2,4,4,6,6,8,8-heptamethylcyclotetrasiloxan-2-yl)propyl ester, polymer with

2,5-furandione and 1-methyl-2-(trimethylsilyl)ethyl  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 409320-43-0

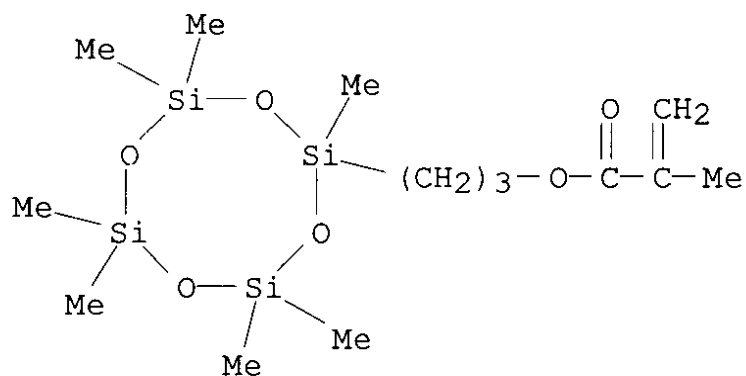
CMF C10 H20 O2 Si



CM 2

CRN 110867-24-8

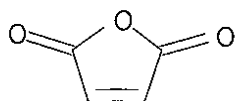
CMF C14 H32 O6 Si4



CM 3

CRN 108-31-6

CMF C4 H2 O3



IC ICM G03C001-492  
NCL 430270100  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)  
Section cross-reference(s): 38  
ST photoacid generating compd chem amplified pos **photoresist**  
material pattern  
IT Positive **photoresists**  
(photoacid generating compds., chem. amplified pos.  
**resist** materials, and pattern forming method)  
IT 601520-40-5P 635715-30-9P  
(photoacid generating compds. for chem. amplified pos.  
**resist** materials)  
IT 460731-17-3 460731-18-4 541547-03-9  
601520-33-6 601520-34-7 601520-36-9  
601520-37-0 601520-39-2 601520-42-7  
601520-43-8 601520-45-0 601520-47-2  
601520-49-4 601520-51-8  
(photoacid generating compds. for chem. amplified pos.  
**resist** materials)  
IT 70-11-1, 2-Bromoacetophenone  
(photoacid generating compds., chem. amplified pos.  
**resist** materials, and pattern forming method)  
IT 19158-66-8P  
(photoacid generating compds., chem. amplified pos.  
**resist** materials, and pattern forming method)  
IT 110-01-0, Tetrahydrothiophene 129318-46-3,  
Bis(perfluoroethylsulfonyl)imide 191101-38-9  
(prepn. of photoacid generating compds. for chem. amplified pos.  
**resist** materials)  
IT 155040-27-0 158593-28-3 177034-75-2 200808-68-0 279244-15-4  
279244-59-6 301153-46-8 326925-68-2 330596-02-6 330596-03-7  
485819-00-9 485819-02-1 490040-72-7 502442-15-1 595558-21-7  
601520-54-1 601520-57-4 601520-62-1 623932-37-6  
635715-32-1 635715-34-3 635715-35-4 635715-36-5  
635715-38-7 635715-39-8  
(resin; chem. amplified pos. **resist** materials contg.)  
  
L57 ANSWER 2 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN  
2003:890212 Document No. 139:388469 Thionium salt photoacid generators  
for chemically amplified **resists** and patterning method  
using the same. Osawa, Yoichi; Nishi, Tsunehiro; Kobayashi,  
Tomohiro (Shin-Etsu Chemical Industry Co., Ltd., Japan). Jpn. Kokai  
Tokkyo Koho JP 2003322964 A2 20031114, 36 pp. (Japanese). CODEN:  
JKXXAF. APPLICATION: JP 2002-129876 20020501.  
AB The photoacid generators R1R2S+CH2R3C:CR4R5.Y- (I; R1, R2 = C1-6  
unsubstituted or O-contg. alkyl; R3-R5 = H, C1-6 alkyl, C6-12 aryl;  
≥1 of R3-R5 are C6-12 aryl; Y- = C1-10 alkylsulfonate, C6-20

arylsulfonate, C2-10 bisalkylsulfonylimide, C3-12 trisalkylsulfonylmethide) or  $R_1R_2S+CH_2C_6H_5-nR_7n.Y-$  (II;  $R_1, R_2, Y-$  = same as above;  $R_7 = H, C1-6 \text{ alkyl}, C1-6 \text{ alkoxy}, NO_2, F, Cl; n = 1-5$ ), and pos. **resists** contg. I or II and resins increasing alkali soly. by acid action are sep. claimed. UV ( $\leq 250 \text{ nm}$ ) or electron-beam lithog. on the **resists**, producing submicron patterns with good edge sharpness, is further claimed.

IT 601520-62-1 623932-30-9 623932-32-1  
623932-33-2 623932-35-4

(assumed monomers; chem. amplified pos. **resists** contg. thionium salt photoacid generators for submicron UV or electron-beam lithog.)

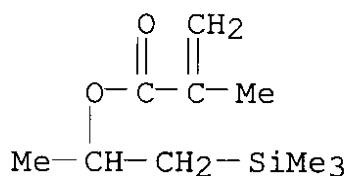
RN 601520-62-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-methyl-2-(trimethylsilyl)ethyl ester, polymer with 2,5-furandione and 3-[3,3,3-trimethyl-1,1-bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 409320-43-0

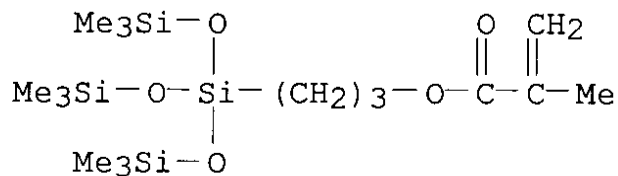
CMF C10 H20 O2 Si



CM 2

CRN 17096-07-0

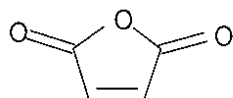
CMF C16 H38 O5 Si4



CM 3

CRN 108-31-6

CMF C4 H2 O3



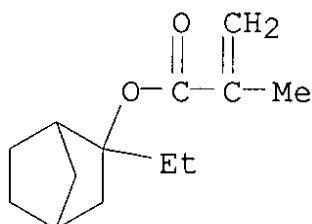
RN 623932-30-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethylbicyclo[2.2.1]hept-2-yl ester,  
 polymer with 2,5-furandione and pentamethyldisiloxanyl  
 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 330595-98-7

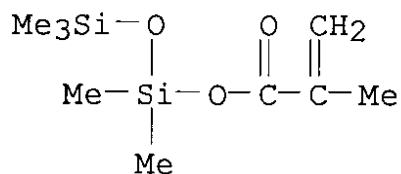
CMF C13 H20 O2



CM 2

CRN 4880-04-0

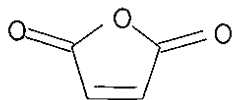
CMF C9 H20 O3 Si2



CM 3

CRN 108-31-6

CMF C4 H2 O3



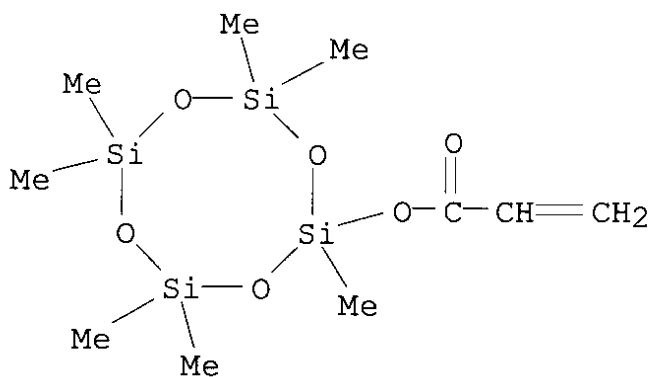
RN 623932-32-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-ethylbicyclo[2.2.1]hept-2-yl ester, polymer with 2,5-furandione and 2,4,4,6,6,8,8-heptamethylcyclotetrasiloxan-2-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 623932-31-0

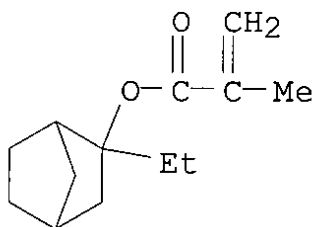
CMF C10 H24 O6 Si4



CM 2

CRN 330595-98-7

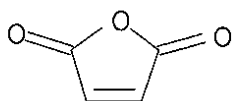
CMF C13 H20 O2



CM 3

CRN 108-31-6

CMF C4 H2 O3



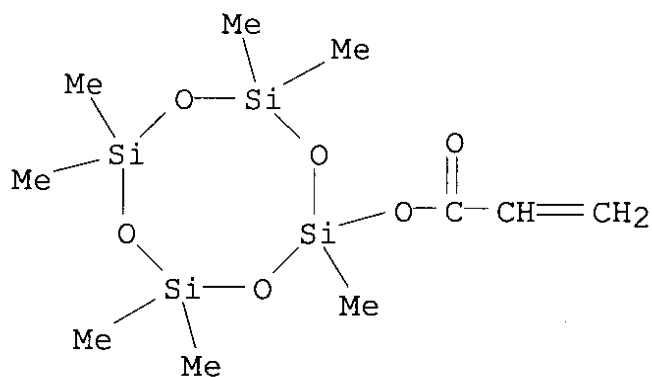
RN 623932-33-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-methyl-2-(trimethylsilyl)ethyl ester, polymer with 2,5-furandione and 2,4,4,6,6,8,8-heptamethylcyclotetrasiloxan-2-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 623932-31-0

CMF C10 H24 O6 Si4

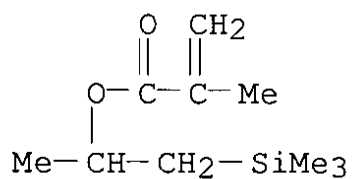


CM 2

CRN 409320-43-0

CMF C10 H20 O2 Si

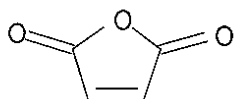




CM 3

CRN 108-31-6

CMF C4 H2 O3



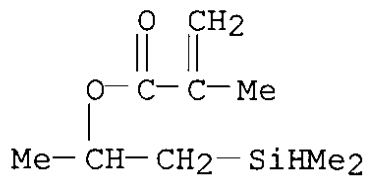
RN 623932-35-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(dimethylsilyl)-1-methylethyl ester,  
 polymer with 2,5-furandione and 2,4,4,6,6,8,8-  
 heptamethylcyclotetrasiloxan-2-yl 2-propenoate (9CI) (CA INDEX  
 NAME)

CM 1

CRN 623932-34-3

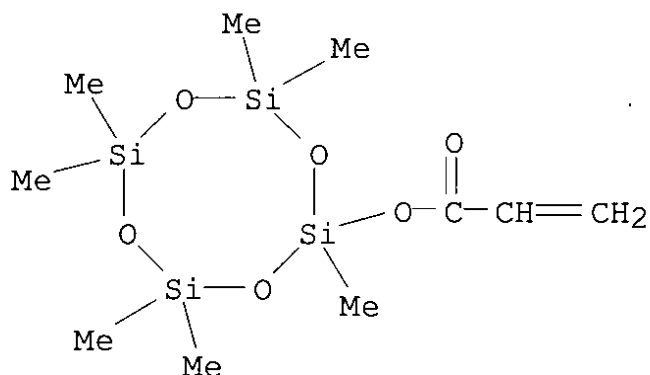
CMF C9 H18 O2 Si



CM 2

CRN 623932-31-0

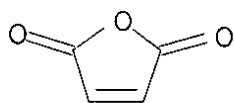
CMF C10 H24 O6 Si4



CM 3

CRN 108-31-6

CMF C4 H2 O3



IT 623932-18-3P 623932-19-4P

(chem. amplified pos. **resists** contg. thionium salt  
photoacid generators for submicron UV or electron-beam lithog.)

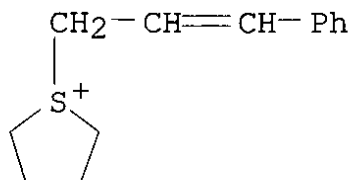
RN 623932-18-3 HCAPLUS

CN Thiophenium, tetrahydro-1-(3-phenyl-2-propenyl)-, salt with  
1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl]ethanesulfonamid  
e (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 151231-03-7

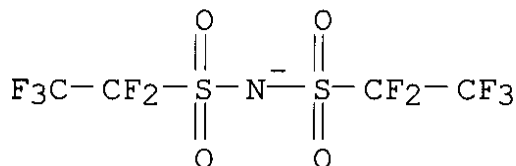
CMF C13 H17 S



CM 2

CRN 129318-46-3

CMF C4 F10 N 04 S2



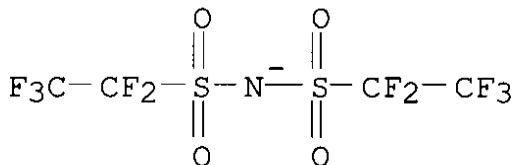
RN 623932-19-4 HCAPLUS

CN Thiophenium, tetrahydro-1-(phenylmethyl)-, salt with  
 1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl]ethanesulfonamid  
 e (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 129318-46-3

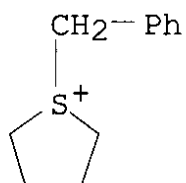
CMF C4 F10 N 04 S2



CM 2

CRN 46116-19-2

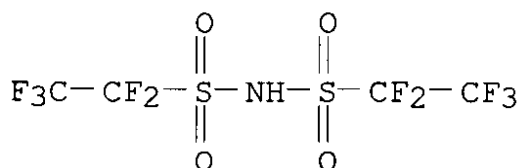
CMF C11 H15 S



IT 152894-10-5

(chem. amplified pos. **resists** contg. thionium salt  
 photoacid generators for submicron UV or electron-beam lithog.)

RN 152894-10-5 HCAPLUS  
 CN Ethanesulfonamide, 1,1,2,2,2-pentafluoro-N-  
 [(pentafluoroethyl)sulfonyl]- (9CI) (CA INDEX NAME)

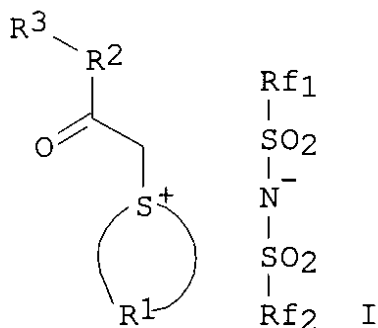


IC ICM G03F007-004  
 ICS G03F007-039; H01L021-027  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and  
 Other Reprographic Processes)  
 Section cross-reference(s): 29, 38  
 ST thionium salt photoacid generator pos chem amplified **resist**  
 ; submicron UV photolithog thiacyclopentanium salt photoacid  
 generator; electron beam lithog thionium salt photoacid generator  
 IT Positive **photoresists**  
 (UV; chem. amplified pos. **resists** contg. thionium salt  
 photoacid generators for submicron UV or electron-beam lithog.)  
 IT Catalysts  
 (photochem.; chem. amplified pos. **resists** contg.  
 thionium salt photoacid generators for submicron UV or  
 electron-beam lithog.)  
 IT Electron beam **resists**  
 (pos.-working; chem. amplified pos. **resists** contg.  
 thionium salt photoacid generators for submicron UV or  
 electron-beam lithog.)  
 IT Photolithography  
 (submicron UV; chem. amplified pos. **resists** contg.  
 thionium salt photoacid generators for submicron UV or  
 electron-beam lithog.)  
 IT Electron beam lithography  
 (submicron; chem. amplified pos. **resists** contg.  
 thionium salt photoacid generators for submicron UV or  
 electron-beam lithog.)  
 IT 155040-27-0 301153-46-8 326925-68-2 330596-02-6 330596-03-7  
 485819-02-1 490040-72-7 595558-21-7 601520-54-1  
**601520-62-1** 623932-20-7 623932-22-9 623932-23-0  
 623932-24-1 623932-26-3 623932-27-4 623932-29-6  
**623932-30-9 623932-32-1 623932-33-2**  
**623932-35-4** 623932-36-5 623932-37-6 623932-39-8  
 623932-41-2  
 (assumed monomers; chem. amplified pos. **resists** contg.  
 thionium salt photoacid generators for submicron UV or

- electron-beam lithog.)  
 IT 343775-57-5P 623932-16-1P 623932-17-2P **623932-18-3P**  
**623932-19-4P**  
 (chem. amplified pos. **resists** contg. thionium salt  
 photoacid generators for submicron UV or electron-beam lithog.)  
 IT 39153-56-5 144317-44-2 197447-16-8 227199-92-0 301664-71-1  
 (chem. amplified pos. **resists** contg. thionium salt  
 photoacid generators for submicron UV or electron-beam lithog.)  
 IT 60872-03-9P  
 (chem. amplified pos. **resists** contg. thionium salt  
 photoacid generators for submicron UV or electron-beam lithog.)  
 IT 98-59-9, p-Toluenesulfonyl chloride 98-67-9, 4-Phenolsulfonic acid  
 100-39-0, Benzyl bromide 110-01-0, Tetrahydrothiophene  
 4392-24-9, Cinnamyl bromide 29420-49-3, Potassium  
 perfluorobutanesulfonate **152894-10-5**  
 (chem. amplified pos. **resists** contg. thionium salt  
 photoacid generators for submicron UV or electron-beam lithog.)

L57 ANSWER 3 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN  
 2003:734749 Document No. 139:267981 Photosensitive acid-generating  
 agent, chemically amplified positively-working **photoresist**  
 material, and patterning method. Hatakeyama, Jun; Kobayashi,  
 Tomohiro; Osawa, Yoichi (Shin-Etsu Chemical Industry Co., Ltd.,  
 Japan). Jpn. Kokai Tokkyo Koho JP 2003261529 A2 20030919, 49 pp.  
 (Japanese). CODEN: JKXXAF. APPLICATION: JP 2002-369145 20021220.  
 PRIORITY: JP 2001-397192 20011227.

GI



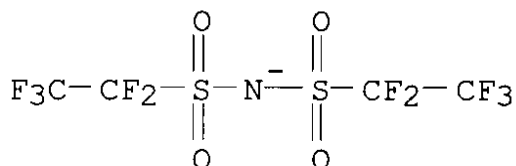
AB The acid-generating agent is a sulfonium salt represented as I [R1 = C2-8 alkylene; R2 = direct bond, O, N, C1-4 alkylene; R3 = (substituted) linear, branched, or cyclic alkyl, aryl; Rf1 and/or Rf2 = F-contg. C1-20 linear, branched, or cyclic alkyl which may involve OH, carbonyl, ester, ether or aryl; Rf1 and Rf2 may form rings]. The chem. amplified pos. working **photoresist**

contains, a base resin, a solvent, and an agent releasing an alkylimidic acid, preferably I or  $R_4nM^+ Rf_1SO_2NSO_2Rf_2^-$  [ $R_4$  = linear, branched, or cyclic alkyl (involving carbonyl, ester, ether, thioether, or double bond), aryl, aralkyl; M = iodonium, sulfonium; n = 2, 3]. The **photoresist** material is applied on a substrate, heated, exposed to high-energy radiation with wavelength  $\leq 300$  nm through a **photomask**, heated, and developed to form a pattern. The pattern with high resolu., small line edge roughness, and heat and storage stability is obtained by the method.

IT **129318-46-3**, Bis(perfluoroethylsulfonyl)imide  
(for prepn. of photosensitive acid-generating agent for chem. amplified pos.-working **photoresist** material)

RN 129318-46-3 HCAPLUS

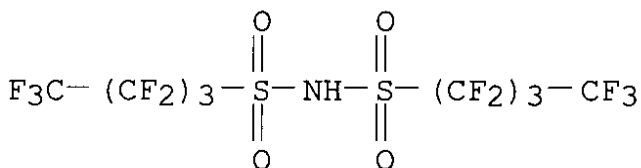
CN Ethanesulfonamide, 1,1,2,2,2-pentafluoro-N-  
[(pentafluoroethyl)sulfonyl]-, ion(1-) (9CI) (CA INDEX NAME)



IT **39847-39-7P**  
(intermediate; for prepn. of photosensitive acid-generating agent for chem. amplified pos.-working **photoresist** material)

RN 39847-39-7 HCAPLUS

CN 1-Butanesulfonamide, 1,1,2,2,3,3,4,4,4-nonafluoro-N-  
[(nonafluorobutyl)sulfonyl]- (9CI) (CA INDEX NAME)



IT **460731-17-3 460731-18-4 541547-03-9**  
**601520-33-6 601520-34-7 601520-36-9**  
**601520-37-0 601520-39-2 601520-43-8**  
**601520-45-0 601520-47-2 601520-49-4**  
**601520-51-8**

(photosensitive fluoroalkylimidic acid-generating agent for chem. amplified pos.-working **photoresist** material)

RN 460731-17-3 HCAPLUS

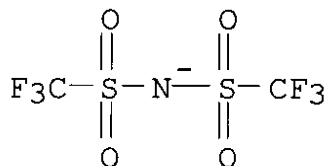
CN Sulfonium, triphenyl-, salt with 1,1,1-trifluoro-N-

[(trifluoromethyl)sulfonyl]methanesulfonamide (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 98837-98-0

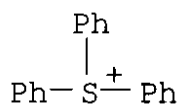
CMF C2 F6 N O4 S2



CM 2

CRN 18393-55-0

CMF C18 H15 S



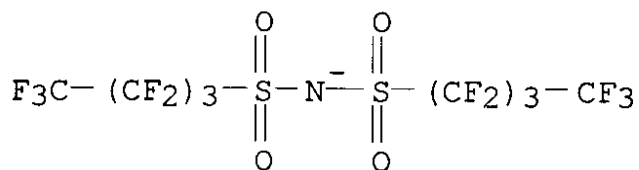
RN 460731-18-4 HCAPLUS

CN Sulfonium, triphenyl-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-N-[(nonafluorobutyl)sulfonyl]-1-butanesulfonamide (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 191101-38-9

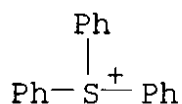
CMF C8 F18 N O4 S2



CM 2

CRN 18393-55-0

CMF C18 H15 S



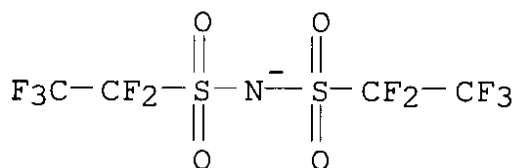
RN 541547-03-9 HCAPLUS

CN Sulfonium, triphenyl-, salt with 1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl]ethanesulfonamide (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 129318-46-3

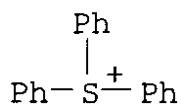
CMF C4 F10 N O4 S2



CM 2

CRN 18393-55-0

CMF C18 H15 S



RN 601520-33-6 HCAPLUS

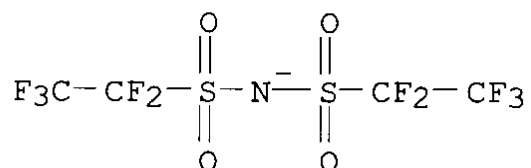
CN Sulfonium, cyclopropyldiphenyl-, salt with 1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl]ethanesulfonamide (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 129318-46-3



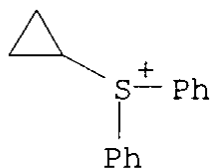
CMF C4 F10 N O4 S2



CM 2

CRN 46489-36-5

CMF C15 H15 S



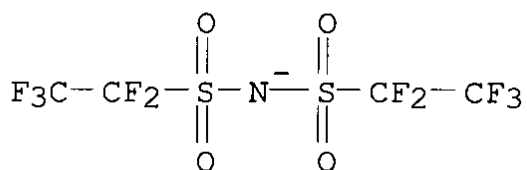
RN 601520-34-7 HCAPLUS

CN Sulfonium, dimethylphenyl-, salt with 1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl]ethanesulfonamide (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 129318-46-3

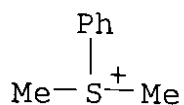
CMF C4 F10 N O4 S2



CM 2

CRN 45694-57-3

CMF C8 H11 S



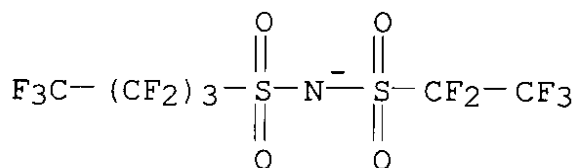
RN 601520-36-9 HCAPLUS

CN Sulfonium, triphenyl-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-N-[(pentafluoroethyl)sulfonyl]-1-butanesulfonamide (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 601520-35-8

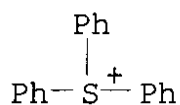
CMF C6 F14 N O4 S2



CM 2

CRN 18393-55-0

CMF C18 H15 S



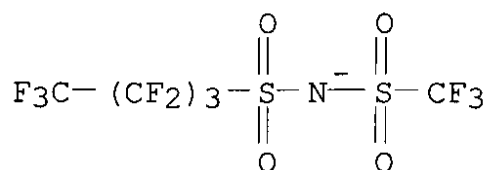
RN 601520-37-0 HCAPLUS

CN Sulfonium, triphenyl-, salt with 1,1,2,2,3,3,4,4,4-nonafluoro-N-[(trifluoromethyl)sulfonyl]-1-butanesulfonamide (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 230627-60-8

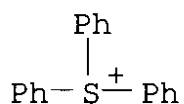
CMF C5 F12 N O4 S2



CM 2

CRN 18393-55-0

CMF C18 H15 S



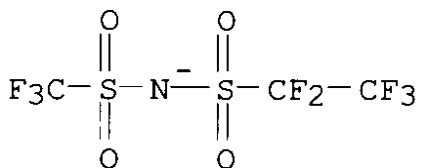
RN 601520-39-2 HCAPLUS

CN Sulfonium, triphenyl-, salt with 1,1,2,2,2-pentafluoro-N-  
[(trifluoromethyl)sulfonyl]ethanesulfonamide (1:1) (9CI) (CA INDEX  
NAME)

CM 1

CRN 601520-38-1

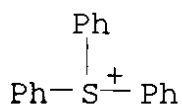
CMF C3 F8 N O4 S2



CM 2

CRN 18393-55-0

CMF C18 H15 S



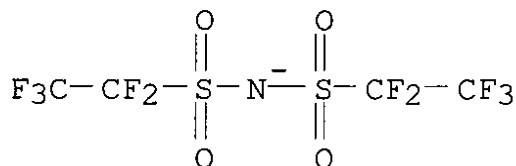
RN 601520-43-8 HCAPLUS

CN 2H-Thiopyranium, tetrahydro-1-(2-oxo-2-phenylethyl)-, salt with  
1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl]ethanesulfonamid  
e (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 129318-46-3

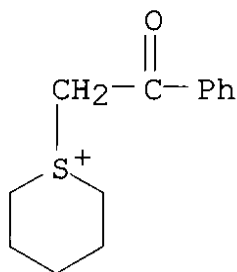
CMF C4 F10 N 04 S2



CM 2

CRN 71967-56-1

CMF C13 H17 O S

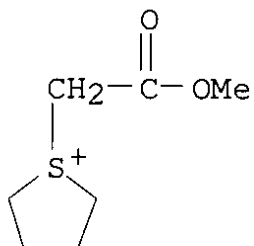


RN 601520-45-0 HCAPLUS

CN Thiophenium, tetrahydro-1-(2-methoxy-2-oxoethyl)-, salt with  
1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl]ethanesulfonamid  
e (1:1) (9CI) (CA INDEX NAME)

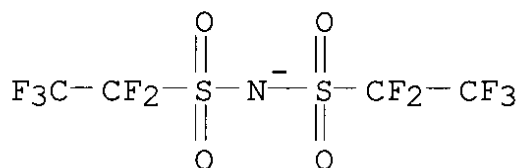
CM 1

CRN 601520-44-9  
CMF C7 H13 O2 S



CM 2

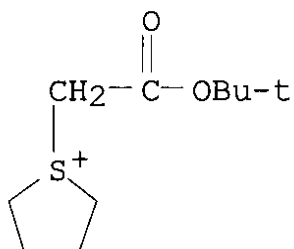
CRN 129318-46-3  
CMF C4 F10 N O4 S2



RN 601520-47-2 HCAPLUS  
CN Thiophenium, 1-[2-(1,1-dimethylethoxy)-2-oxoethyl]tetrahydro-, salt  
with 1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl]ethanesulfo  
namide (1:1) (9CI) (CA INDEX NAME)

CM 1

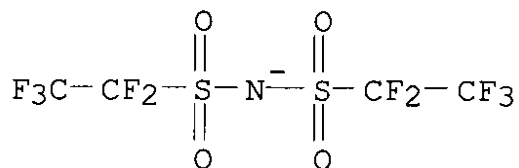
CRN 601520-46-1  
CMF C10 H19 O2 S



CM 2

CRN 129318-46-3

CMF C4 F10 N 04 S2



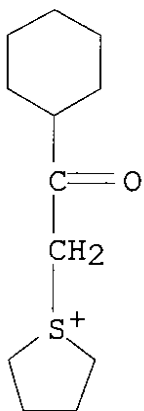
RN 601520-49-4 HCAPLUS

CN Thiophenium, 1-(2-cyclohexyl-2-oxoethyl)tetrahydro-, salt with  
1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl]ethanesulfonamid  
e (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 601520-48-3

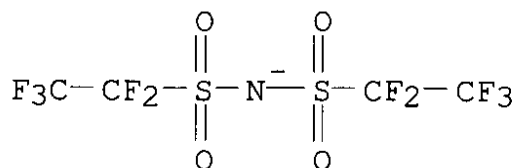
CMF C12 H21 O S



CM 2

CRN 129318-46-3

CMF C4 F10 N 04 S2



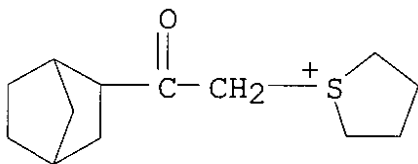
RN 601520-51-8 HCAPLUS

CN Thiophenium, 1-(2-bicyclo[2.2.1]hept-2-yl-2-oxoethyl)tetrahydro-,  
salt with 1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl]ethane  
sulfonamide (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 601520-50-7

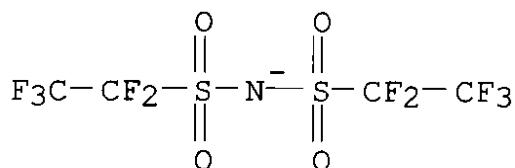
CMF C13 H21 O S



CM 2

CRN 129318-46-3

CMF C4 F10 N O4 S2



IT 601520-40-5P

(photosensitive fluoroalkylimidic acid-generating agent for chem.  
amplified pos.-working photoresist material)

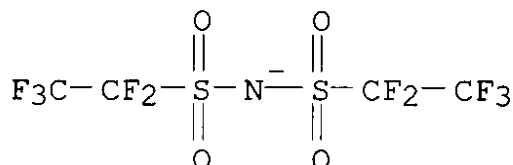
RN 601520-40-5 HCAPLUS

CN Thiophenium, tetrahydro-1-(2-oxo-2-phenylethyl)-, salt with  
1,1,2,2,2-pentafluoro-N-[(pentafluoroethyl)sulfonyl]ethanesulfonamid  
e (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 129318-46-3

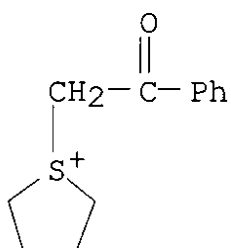
CMF C4 F10 N O4 S2



CM 2

CRN 58162-29-1

CMF C12 H15 O S



IT 601520-59-6 601520-60-9 601520-61-0  
601520-62-1 601520-64-3

(photosensitive fluoroalkylimidic acid-generating agent for chem.  
amplified pos.-working **photoresist** material)

RN 601520-59-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, (1R,2R,4S)-2-ethylbicyclo[2.2.1]hept-2-  
yl ester, rel-, polymer with ethenylpentamethyldisiloxane and  
2,5-furandione (9CI) (CA INDEX NAME)

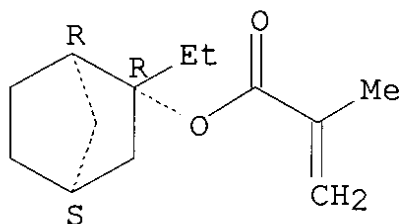
CM 1

CRN 271598-68-6

CMF C13 H20 O2

Relative stereochemistry.

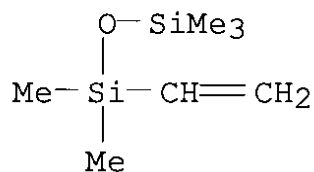




CM 2

CRN 1438-79-5

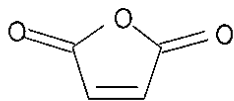
CMF C7 H18 O Si2



CM 3

CRN 108-31-6

CMF C4 H2 O3



RN 601520-60-9 HCAPLUS

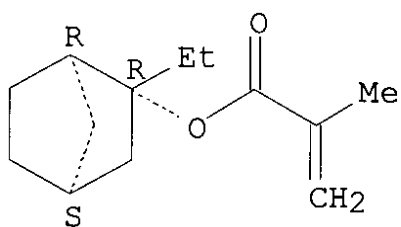
CN 2-Propenoic acid, 2-methyl-, (1R,2R,4S)-2-ethylbicyclo[2.2.1]hept-2-yl ester, rel-, polymer with ethenylheptamethylcyclotetrasiloxane and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 271598-68-6

CMF C13 H20 O2

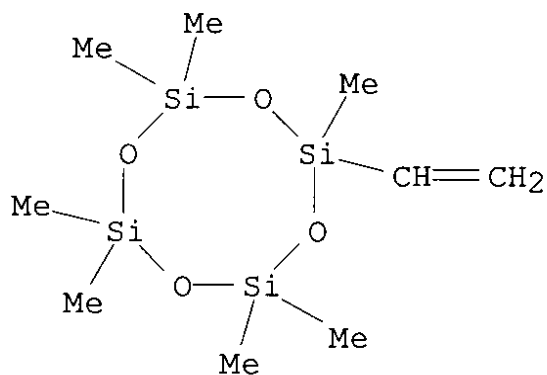
Relative stereochemistry.



CM 2

CRN 3763-39-1

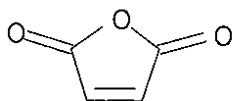
CMF C9 H24 O4 Si4



CM 3

CRN 108-31-6

CMF C4 H2 O3

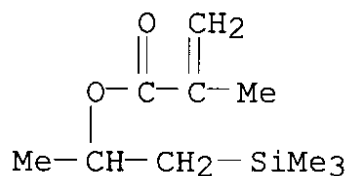


RN 601520-61-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-methyl-2-(trimethylsilyl)ethyl ester,  
polymer with ethenylheptamethylcyclotetrasiloxane and 2,5-furandione  
(9CI) (CA INDEX NAME)

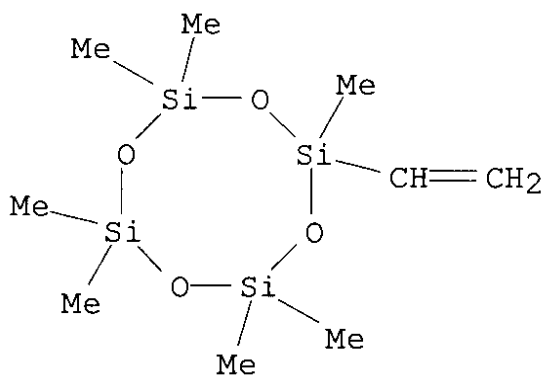
CM 1

CRN 409320-43-0  
CMF C10 H20 O2 Si



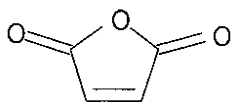
CM 2

CRN 3763-39-1  
CMF C9 H24 O4 Si4



CM 3

CRN 108-31-6  
CMF C4 H2 O3

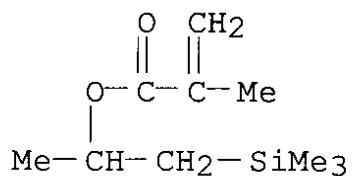


RN 601520-62-1 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 1-methyl-2-(trimethylsilyl)ethyl ester,  
polymer with 2,5-furandione and 3-[3,3,3-trimethyl-1,1-  
bis[(trimethylsilyl)oxy]disiloxanyl]propyl 2-methyl-2-propenoate  
(9CI) (CA INDEX NAME)

CM 1

CRN 409320-43-0

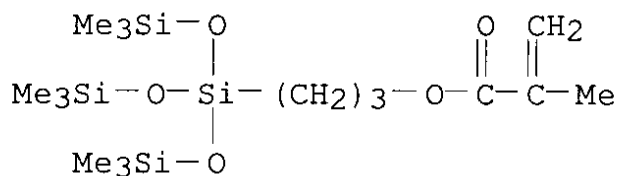
CMF C10 H20 O2 Si



CM 2

CRN 17096-07-0

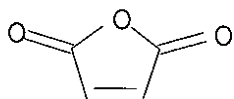
CMF C16 H38 O5 Si4



CM 3

CRN 108-31-6

CMF C4 H2 O3

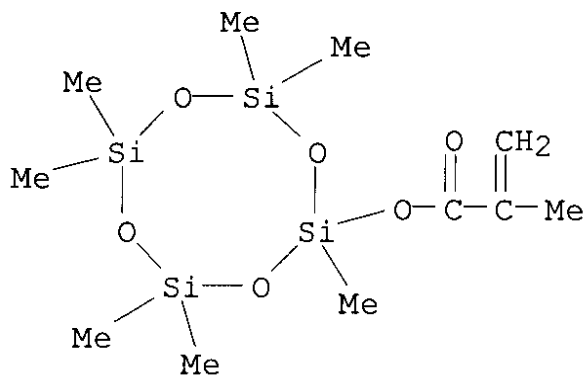


RN 601520-64-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2,4,4,6,6,8,8-heptamethylcyclotetrasiloxan-2-yl ester, polymer with 2,5-furandione and 1-methyl-2-(trimethylsilyl)ethyl 2-methyl-2-propenoate (9CI)  
(CA INDEX NAME)

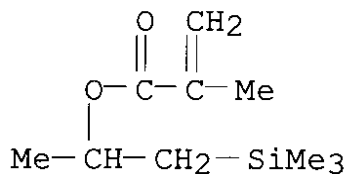
CM 1

CRN 601520-63-2  
CMF C11 H26 O6 Si4



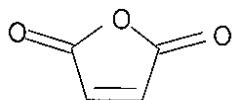
CM 2

CRN 409320-43-0  
CMF C10 H20 O2 Si



CM 3

CRN 108-31-6  
CMF C4 H2 O3



IC ICM C07C311-48  
ICS C07D333-46; C07D335-02; G03F007-004; G03F007-039; H01L021-027  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)  
Section cross-reference(s): 23, 38

- ST chem amplified pos working **photoresist**; photosensitive acid generating agent **photoresist**; fluoroalkylimidic acid generating sulfonium compd **photoresist**
- IT **Photoresists**  
(photosensitive fluoroalkylimidic acid-generating agent for chem. amplified pos.-working **photoresist** material)
- IT Polyalkenamers  
(photosensitive fluoroalkylimidic acid-generating agent for chem. amplified pos.-working **photoresist** material)
- IT 81-25-4 828-51-3 122752-67-4 308141-03-9 359635-45-3  
601520-70-1  
(dissoln. inhibitor; photosensitive fluoroalkylimidic acid-generating agent for chem. amplified pos.-working **photoresist** material contg.)
- IT 70-11-1, 2-Bromoacetophenone 110-01-0, Tetrahydrothiophene  
**129318-46-3**, Bis(perfluoroethylsulfonyl)imide  
(for prepn. of photosensitive acid-generating agent for chem. amplified pos.-working **photoresist** material)
- IT **39847-39-7P** 601520-67-6P  
(intermediate; for prepn. of photosensitive acid-generating agent for chem. amplified pos.-working **photoresist** material)
- IT **460731-17-3 460731-18-4 541547-03-9**  
**601520-33-6 601520-34-7 601520-36-9**  
**601520-37-0 601520-39-2 601520-42-7**  
**601520-43-8 601520-45-0 601520-47-2**  
**601520-49-4 601520-51-8**  
(photosensitive fluoroalkylimidic acid-generating agent for chem. amplified pos.-working **photoresist** material)
- IT **601520-40-5P** 601520-69-8P  
(photosensitive fluoroalkylimidic acid-generating agent for chem. amplified pos.-working **photoresist** material)
- IT 155040-27-0 158593-28-3 177034-75-2 200808-68-0 279244-15-4  
279244-59-6 290808-54-7 301153-46-8 326925-68-2 417702-19-3  
485391-28-4 601520-52-9 601520-53-0 601520-54-1 601520-55-2  
601520-56-3 601520-57-4 601520-58-5 **601520-59-6**  
**601520-60-9 601520-61-0 601520-62-1**  
**601520-64-3 601520-65-4 601520-66-5**  
(photosensitive fluoroalkylimidic acid-generating agent for chem. amplified pos.-working **photoresist** material)
- IT 102-71-6, Triethanolamine, uses 102-82-9, Tributylamine  
3002-18-4 211919-60-7, Trismethoxy(methoxyethyl)amine  
218770-96-8, Trismethoxy(ethoxymethoxy)ethylamine 449165-34-8  
(photosensitive fluoroalkylimidic acid-generating agent for chem. amplified pos.-working **photoresist** material contg.)

Jung, Jae Chang; Shin, Ki Soo; Kong, Keun Kyu; Lee, Sung Koo; Hwang, Young Sun (S. Korea). U.S. Pat. Appl. Publ. US 2003130148 A1 20030710, 29 pp. (English). CODEN: USXXCO. APPLICATION: US 2002-317578 20021212. PRIORITY: KR 2001-78470 20011212; KR 2001-79354 20011214; KR 2001-79355 20011214; KR 2001-80572 20011218; KR 2001-80573 20011218; KR 2001-80574 20011218; KR 2001-80575 20011218.

AB The cleaning soln. includes H<sub>2</sub>O,  $\geq 1$  surfactants as additive selected from polyoxyalkylene compds., a salt of alc. amine and hydrocarbon compds. having carboxylic acid group, a salt of alc. amine and hydrocarbon compds. having sulfonic acid group, polyethylene glycol compds., sulfonyl compds., compds. having a mol. wt. 1000-10,000 including oxy(trihydroxy)tetrahydropyran repeating unit, polyether denatured Si compds., and alc. compds.

IT **177719-93-6D**, trimethylsilyl-terminated **560060-94-8D**, trimethylsilyl-terminated **560060-96-0D**, trimethylsilyl-terminated (assumed monomers; in cleaning soln. for removing **photoresists**)

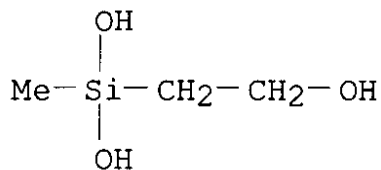
RN 177719-93-6 HCAPLUS

CN Silanediol, dimethyl-, polymer with (2-hydroxyethyl)methylsilanediol (9CI) (CA INDEX NAME)

CM 1

CRN 177719-92-5

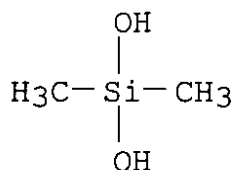
CMF C3 H10 O3 Si



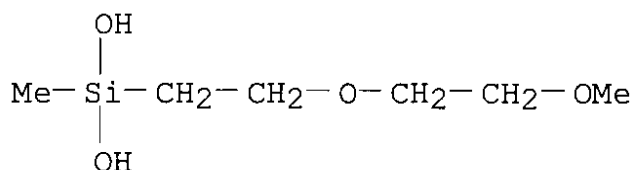
CM 2

CRN 1066-42-8

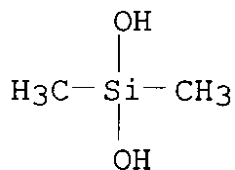
CMF C2 H8 O2 Si



RN 560060-94-8 HCAPLUS  
 CN Silanediol, dimethyl-, polymer with [2-(2-methoxyethoxy)ethyl]methyilsilanediol (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 560060-93-7  
 CMF C6 H16 O4 Si

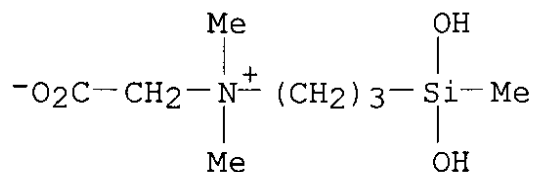


CM 2  
 CRN 1066-42-8  
 CMF C2 H8 O2 Si



RN 560060-96-0 HCAPLUS  
 CN 1-Propanaminium, N-(carboxymethyl)-3-(dihydroxymethylsilyl)-N,N-dimethyl-, inner salt, polymer with dimethylsilanediol (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 560060-95-9  
 CMF C8 H19 N O4 Si

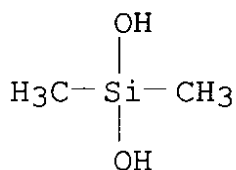




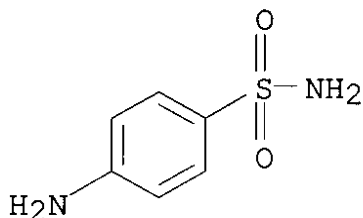
CM 2

CRN 1066-42-8

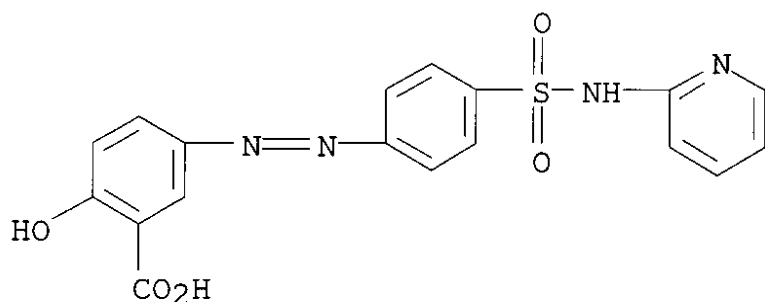
CMF C2 H8 O2 Si



IT 63-74-1, Sulfanilamide 599-79-1, Sulfasalazine  
 (in cleaning soln. for removing **photoresists**)  
 RN 63-74-1 HCAPLUS  
 CN Benzenesulfonamide, 4-amino- (9CI) (CA INDEX NAME)



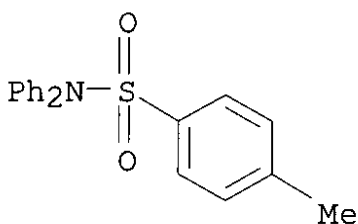
RN 599-79-1 HCAPLUS  
 CN Benzoic acid, 2-hydroxy-5-[[4-[(2-pyridinylamino)sulfonyl]phenyl]azo]- (9CI) (CA INDEX NAME)



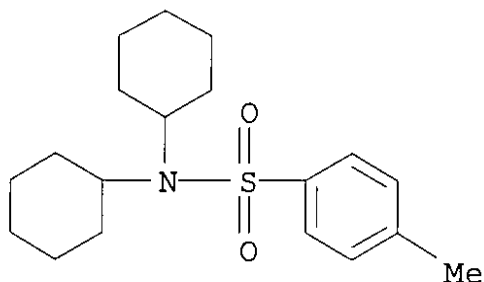
- IC ICM C11D001-00  
 NCL 510175000; 510176000; 510178000; 510499000; 510505000  
 CC 46-6 (Surface Active Agents and Detergents)  
 Section cross-reference(s): 76  
 ST surfactant aq cleaning solvent **photoresist** removal  
 IT Surfactants  
     (in cleaning soln. for removing **photoresists**)  
 IT Polyoxyalkylenes, uses  
     (in cleaning soln. for removing **photoresists**)  
 IT Cleaning solvents  
     **Photoresists**  
     (surfactant-contg. cleaning soln. for removing **photoresist**)  
 IT Polyoxyalkylenes, uses  
     (triol derivs.; in cleaning soln. for removing **photoresists**)  
 IT 177719-93-6D, trimethylsilyl-terminated 560060-94-8D  
     , trimethylsilyl-terminated 560060-96-0D,  
     trimethylsilyl-terminated  
     (assumed monomers; in cleaning soln. for removing **photoresists**)  
 IT 301835-30-3, AX 1020P  
     (cleaning soln. for removing **photoresist** of)  
 IT 57-50-1, Sucrose, uses 3789-97-7, Glucuronamide 9004-95-9,  
     Polyoxyethylene cetyl ether 9004-96-0, Polyoxyethylene monooleate  
     9004-98-2, Polyoxyethyl eneoleyl ether 9004-99-3, Polyoxyethylene  
     monostearate 9005-00-9, Polyoxyethylene stearyl ether 9063-89-2,  
     Polyoxyethyleneoctylphenylether 24938-91-8, Polyoxyethylene  
     tridecyl ether 26635-92-7, Polyoxyethylene stearylamine ether  
     27252-75-1, Polyoxyethylene octyl ether 31017-83-1, Ethoxylated  
     laurylamine 106392-12-5, Ethylene oxide-propylene oxide block  
     copolymer  
     (cleaning soln. for removing **photoresist** of)  
 IT 50-99-7, Glucose, uses 63-42-3, Lactose 63-74-1,  
     Sulfanilamide 112-60-7, Tetraethylene glycol 121-57-3,  
     Sulfanilic acid 585-86-4, Lactitol 599-79-1,

Sulfasalazine 2717-15-9 2717-16-0 5329-14-6, Sulfamic acid  
6556-12-3, Glucuronic acid 9002-92-0, Polyoxyethylene lauryl ether  
9004-81-3, Polyoxyethylene monolaurate 9016-45-9, Polyoxyethylene  
nonylphenyl ether 9066-51-7 9066-52-8 14806-72-5 25322-68-3,  
Polyethylene glycol 25322-68-3D, triol derivs. 52243-33-1  
53147-96-9 67674-19-5 91979-17-8 560060-89-1  
(in cleaning soln. for removing **photoresists**)

L57 ANSWER 5 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN  
2003:111378 Document No. 138:161077 Radiation-sensitive chemically  
amplified **resist** resin composition containing specific  
nitrogen-containing compound as acid-diffusion-control agent.  
Nagai, Tomoki; Kobayashi, Eiichi; Shimokawa, Tsutomu (JSR Ltd.,  
Japan). Jpn. Kokai Tokkyo Koho JP 2003043677 A2 20030213, 25 pp.  
(Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-234136 20010801.  
AB The title compn. contains a radiation-sensitive acid-generator and  
an acid-sensitive alkali solubilizable resin or both alkali  
solubilizable resin/alkali-soly.-controlling agent for the resin,  
wherein sulfur compd. (R1)-(R2)N-S(O)<sub>2</sub>-R3 (R1-3 = H, C1-20  
hydrocarbon). The compn. provides the **resists** of high  
resoln., high durability, and good storageability.  
IT **4703-19-9P 39830-56-3P 479628-09-6P**  
(radiation-sensitive chem. amplified **resist** resin  
compn. contg. specific nitrogen-contg. compd.)  
RN 4703-19-9 HCAPLUS  
CN Benzenesulfonamide, 4-methyl-N,N-diphenyl- (9CI) (CA INDEX NAME)



RN 39830-56-3 HCAPLUS  
CN Benzenesulfonamide, N,N-dicyclohexyl-4-methyl- (9CI) (CA INDEX  
NAME)



RN 479628-09-6 HCAPLUS

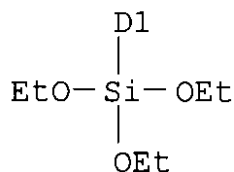
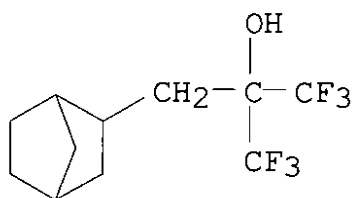
CN Bicyclo[2.2.1]heptane-2-carboxylic acid, 5(or 6)-(triethoxysilyl)-, 1,1-dimethylethyl ester, polymer with triethoxymethylsilane and 5(or 6)-(triethoxysilyl)- $\alpha,\alpha$ -bis(trifluoromethyl)bicyclo[2.2.1]heptane-2-ethanol (9CI) (CA INDEX NAME)

CM 1

CRN 365546-74-3

CMF C17 H28 F6 O4 Si

CCI IDS

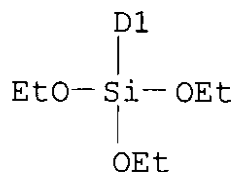
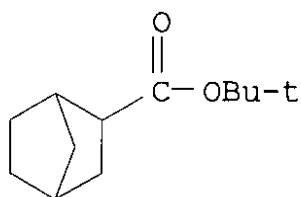


CM 2

CRN 365546-63-0

CMF C18 H34 O5 Si

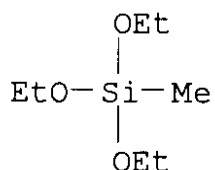
CCI IDS



CM 3

CRN 2031-67-6

CMF C7 H18 O3 Si



- IC ICM G03F007-004  
ICS G03F007-038; G03F007-039; H01L021-027
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST radiation sensitive amplified **resist** resin compn
- IT **Resists**  
(radiation-sensitive, chem. amplified; radiation-sensitive chem. amplified **resist** resin compn. contg. specific nitrogen-contg. compd.)
- IT 101-83-7, Dicyclohexylamine 63458-90-2, 1H-Imidazole, 1-methyl-, mono(4-methylbenzenesulfonate)  
(acid-diffusion-control agent; radiation-sensitive chem. amplified **resist** resin compn. contg. specific nitrogen-contg. compd.)
- IT 107-30-2, Methoxymethyl chloride 122-39-4, Diphenylamine, reactions 288-32-4, Imidazole, reactions 716-79-0, 2-Phenylbenzimidazole 4106-18-7, 1H-Benzotriazole, 1-(phenylsulfonyl)- 13578-48-8, 1H-1,2,4-Triazole,

1-(phenylsulfonyl)- 18162-48-6

(radiation-sensitive chem. amplified **resist** resin  
compn. contg. specific nitrogen-contg. compd.)

IT **4703-19-9P** 15728-50-4P **39830-56-3P** 46248-01-5P  
95418-60-3DP, p-tert-Butoxystyrene homopolymer, hydrolized  
123589-22-ODP, ethoxyethyl ether 200808-68-0P 330576-44-8P  
406198-64-9P 428859-16-9P **479628-09-6P** 494868-77-8P  
(radiation-sensitive chem. amplified **resist** resin  
compn. contg. specific nitrogen-contg. compd.)

L57 ANSWER 6 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

2002:799445 Document No. 139:44123 New ionic photo-acid generators (PAGs) incorporating novel perfluorinated anions. Lamanna, William M.; Kessel, Carl R.; Savu, Pat M.; Cheburkov, Yuri; Brinduse, Steve; Kestner, Thomas A.; Lillquist, Gerald J.; Parent, Mike J.; Moorhouse, Karrie S.; Zhang, Yifan; Birznieks, Grant; Kruger, Terry; Pallazzotto, Michael C. (3M Co., St Paul, MN, USA). Proceedings of SPIE-The International Society for Optical Engineering, 4690 (Pt. 2, Advances in Resist Technology and Processing XIX), 817-828 (English) 2002. CODEN: PSISDG. ISSN: 0277-786X. Publisher: SPIE-The International Society for Optical Engineering.

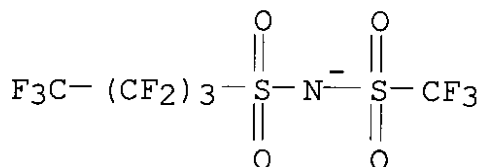
AB A new class of ionic photo-acid generators (PAGs) useful in chem. amplified **photoresist** formulations has been developed. The new PAGs are salts comprising a photoactive cation and a fluoroorg. sulfonylimide or sulfonylmethide anion. These highly delocalized, nitrogen- and carbon-centered anions are extremely nonbasic and weakly coordinating. Correspondingly, their conjugate acids are powerful superacids. The imide and methide acids produced by photolysis of the corresponding ionic PAGs are highly active in initiating the cationic polymn. of various org. monomers (as in neg. **resists**) and have been shown to catalyze the deprotection of acid-sensitive org. functional groups (as in high activation energy, pos. **resists**) with good photospeeds. The unique balance of reactivity and phys. properties provided by the imide and methide anions suggests that they may be useful alternatives to, or replacements for, the org. or inorg. anions commonly employed in existing ionic PAG formulations (e.g., perfluoroalkanesulfonate anions and MF<sub>6</sub><sup>-</sup> anions, where M is Sb, As or P). A family of ionic PAGs based upon these new anions and their combinations with diaryliodonium or triarylsulfonium cations has recently been made available by 3M as exptl. products for lithog. evaluations in pos. and neg. **photoresists**. In this report we will describe the characterization of these PAGs, including m.ps., thermal stabilities, UV extinction coeffs., solubilities and photo-acid volatilities. Potential advantages of these new PAGs in pos. and neg. **photoresist** applications will also be presented.

IT **230627-60-8** **263713-67-3**

(ionic photo-acid generators (PAGs) incorporating novel

perfluorinated anions)

RN 230627-60-8 HCAPLUS

CN 1-Butanesulfonamide, 1,1,2,2,3,3,4,4,4-nonafluoro-N-  
[(trifluoromethyl)sulfonyl]-, ion(1-) (9CI) (CA INDEX NAME)

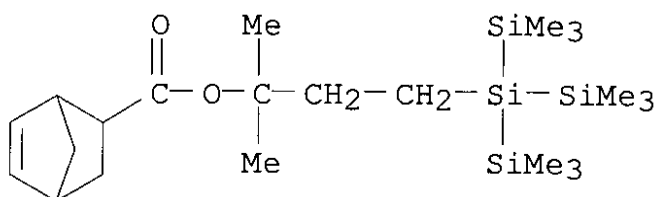
RN 263713-67-3 HCAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 1,1-dimethyl-3-[2,2,2-trimethyl-1,1-bis(trimethylsilyl)disilanyl]propyl ester, polymer with bicyclo[2.2.1]hept-2-ene and 2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 250589-01-6

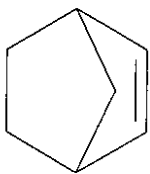
CMF C22 H46 O2 Si4



CM 2

CRN 498-66-8

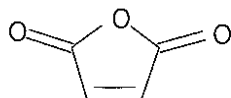
CMF C7 H10



CM 3

CRN 108-31-6

CMF C4 H2 O3



CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT **230627-60-8 263713-67-3** 313664-31-2  
313664-32-3 313664-33-4 460731-22-0 488820-76-4 543700-95-4  
(ionic photo-acid generators (PAGs) incorporating novel perfluorinated anions)

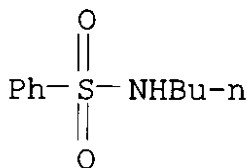
L57 ANSWER 7 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN  
1999:370157 Document No. 131:65888 Method for **resist** pattern formation using a reflection-preventing film containing heat-meltable filler. Sato, Yasuhiko; Ohnishi, Kanenobu (Toshiba Corp., Japan). Jpn. Kokai Tokkyo Koho JP 11154638 A2 19990608 Heisei, 53 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1997-319833 19971120.

AB The method involves the steps of: (1) forming a reflection-preventing film contg. a filler and a phenolic resin on a layer to be patterned; (2) heating the reflection-preventing film to melt the filler; and (3) forming a **resist** pattern on the reflection-preventing film. Method provides the **resist** pattern of an excellent profile on the reflection-preventing film.

IT **3622-84-2 88002-81-7 88003-13-8**,  
Poly(methylpropylsilylene) **95584-36-4**,  
Poly(phenylsilylene) **99936-07-9 143558-05-8**  
(filler for method for **resist** pattern formation)

RN 3622-84-2 HCAPLUS

CN Benzenesulfonamide, N-butyl- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 88002-81-7 HCAPLUS

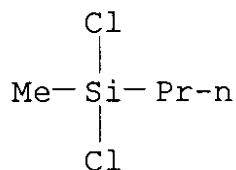
CN Silane, dichloromethylpropyl-, homopolymer (9CI) (CA INDEX NAME)



CM 1

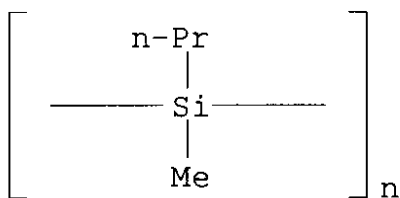
CRN 4518-94-9

CMF C4 H10 Cl2 Si



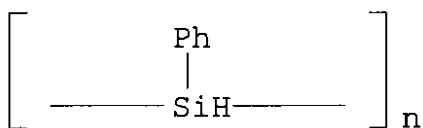
RN 88003-13-8 HCAPLUS

CN Poly(methylpropylsilylene) (9CI) (CA INDEX NAME)



RN 95584-36-4 HCAPLUS

CN Poly(phenylsilylene) (9CI) (CA INDEX NAME)



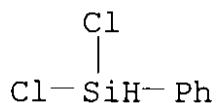
RN 99936-07-9 HCAPLUS

CN Silane, dichlorophenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 1631-84-1

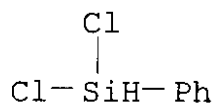
CMF C6 H6 Cl2 Si



RN 143558-05-8 HCAPLUS  
CN Silane, dichlorodiphenyl-, polymer with dichlorophenylsilane (9CI)  
(CA INDEX NAME)

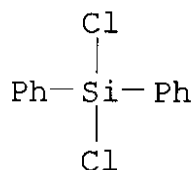
CM 1

CRN 1631-84-1  
CMF C6 H6 Cl2 Si



CM 2

CRN 80-10-4  
CMF C12 H10 Cl2 Si

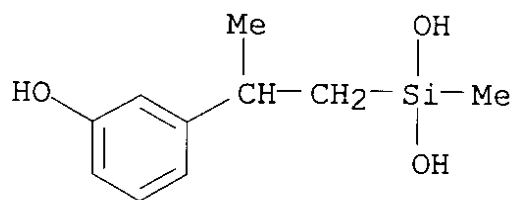


IT 212265-71-9 212265-79-7 227944-24-3  
227944-25-4  
(phenolic resin for method for **resist** pattern  
formation)

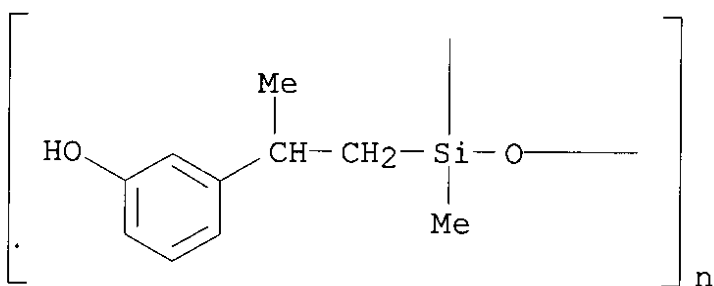
RN 212265-71-9 HCAPLUS  
CN Silanediol, [2-(3-hydroxyphenyl)propyl]methyl-, homopolymer (9CI)  
(CA INDEX NAME)

CM 1

CRN 212265-70-8  
CMF C10 H16 O3 Si



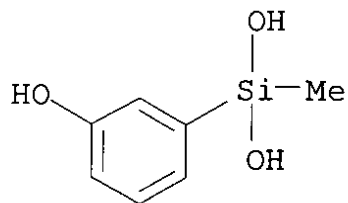
RN 212265-79-7 HCAPLUS  
 CN Poly[oxy[[2-(3-hydroxyphenyl)propyl]methylsilylene]] (9CI) (CA INDEX NAME)



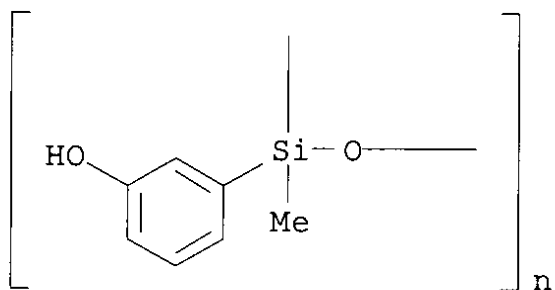
RN 227944-24-3 HCAPLUS  
 CN Silanediol, (3-hydroxyphenyl)methyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 227944-23-2  
 CMF C7 H10 O3 Si



RN 227944-25-4 HCAPLUS  
 CN Poly[oxy[(3-hydroxyphenyl)methylsilylene]] (9CI) (CA INDEX NAME)



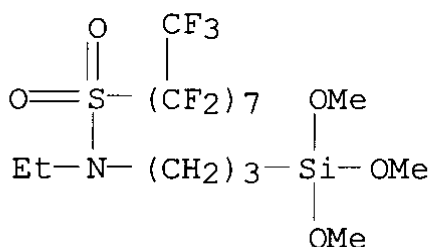
- IC ICM H01L021-027  
ICS G03F007-11
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- IT Polyesters, uses  
(filler for method for **resist** pattern formation)
- IT **Photoresists**  
Semiconductor device fabrication  
(method for pattern formation using a reflection-preventing film with heat-meltable filling-in agent)
- IT Phenolic resins, uses  
(phenolic resin for method for **resist** pattern formation)
- IT 57-11-4D, Stearic acid, alkyl epoxy deriv. 76-22-2, Camphor 77-93-0, Triethylcitrate 78-40-0, Triethylphosphate 84-74-2, Dibutylphthalate 85-71-2, Methylphthalylethylglycolate 87-91-2, Diethyl tartrate, uses 103-50-4, Dibenzyl ether 105-80-6, Diisobutyl azelate 106-01-4, Diethyleneglycol dipelargonate 106-18-3, Butyllaurate 106-79-6, Dimethylsebacate 110-27-0, Isopropylmyristate 112-62-9, Methyloleate 123-25-1, Diethyl succinate 123-80-8, Ethyleneglycol dipropionate 123-95-5, n-Butyl stearate 124-04-9, Hexanedioic acid, uses 131-11-3, Dimethylphthalate 141-24-2 142-91-6, Iso-propylpalmitate 143-29-3, 5,8,11,13,16,19-Hexaoxatricosane 597-71-7, Pentaerythritol tetraacetate 627-93-0, Dimethyl adipate 661-20-1, Isocyanate 1459-93-4, Dimethylisophthalate **3622-84-2** 5153-25-3 6280-99-5 9002-88-4, Polyethylene 9003-07-0, Polypropylene 9003-09-2, Polyvinylmethyl ether 9003-20-7, Polyvinyl acetate 9003-27-4, Polyisobutylene 9003-29-6, Polybutene 9003-53-6, Polystyrene 9003-69-4, Polydivinylbenzene 9011-14-7, Polymethyl methacrylate 9078-70-0, Polypentene 25038-59-9, uses 26446-35-5 26719-50-6 27323-18-8, Biphenyl chloride 30811-69-9, Polyvinyl acrylate 71784-99-1 **88002-81-7 88003-13-8**, Poly(methylpropylsilylene) **95584-36-4**, Poly(phenylsilylene) **99936-07-9 143558-05-8**  
(filler for method for **resist** pattern formation)

IT 9003-35-4 9016-83-5 212265-71-9 212265-79-7  
 227944-24-3 227944-25-4 227948-69-8  
 227948-70-1  
 (phenolic resin for method for **resist** pattern  
 formation)

L57 ANSWER 8 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN  
 1999:127078 Document No. 130:175295 Pattern forming material, pattern  
 forming method, and their applications. Kobayashi, Hironori;  
 Yamamoto, Manabu; Aoki, Daigo; Kamiyama, Hironori; Hikosaka,  
 Shinichi; Kashiwabara, Mitsuhiro (Dai Nippon Printing Co., Ltd.,  
 Japan). PCT Int. Appl. WO 9908158 A1 19990218, 196 pp. DESIGNATED  
 STATES: W: US; RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,  
 IT, LU, MC, NL, PT, SE. (Japanese). CODEN: PIXXD2. APPLICATION:  
 WO 1998-JP3547 19980810. PRIORITY: JP 1997-214845 19970808; JP  
 1997-300295 19971031; JP 1997-313041 19971114; JP 1998-100369  
 19980327; JP 1998-85955 19980331; JP 1998-86293 19980331; JP  
 1998-165392 19980612; JP 1998-167316 19980615; JP 1998-183370  
 19980615.

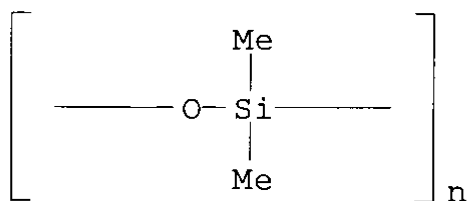
AB A pattern forming material for optically forming a pattern has a  
 photocatalyst-contg. layer on a substrate, wherein the layer contg.  
 a material whose wettability is changed by the action of the  
 photocatalyst when the pattern is exposed to light. Applications  
 thereof includes a color filter, a microlens, and a lithog. plate.

IT 61660-12-6, MF 160E  
 (MF 160E; photocatalyst contg. layer for pattern forming TEM)  
 RN 61660-12-6 HCAPLUS  
 CN 1-Octanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-  
 heptadecafluoro-N-[3-(trimethoxysilyl)propyl]- (9CI) (CA INDEX  
 NAME)



294313

IT 9016-00-6, KF 96 31900-57-9D,  
 Polydimethylsiloxane, hydroxy terminated 156327-07-0  
 (photocatalyst contg. layer for pattern forming TEM)  
 RN 9016-00-6 HCAPLUS  
 CN Poly[oxy(dimethylsilylene)] (8CI, 9CI) (CA INDEX NAME)



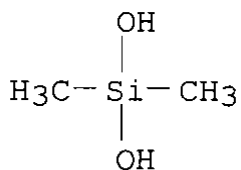
RN 31900-57-9 HCAPLUS

CN Silanediol, dimethyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 1066-42-8

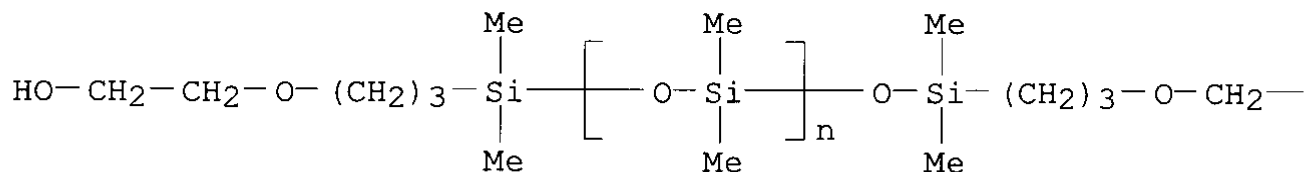
CMF C2 H8 O2 Si



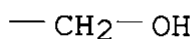
RN 156327-07-0 HCAPLUS

CN Poly[oxy(dimethylsilylene)],  $\alpha$ -[[3-(2-hydroxyethoxy)propyl]dimethylsilyl]- $\omega$ -[[[3-(2-hydroxyethoxy)propyl]dimethylsilyl]oxy]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



IC ICM G03F007-004

ICS G03F007-00; G03F007-075; G02B005-20; G02B003-00

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT **Photoresists**

(pattern forming material, pattern forming method, and their applications)

IT **61660-12-6**, MF 160E

(MF 160E; photocatalyst contg. layer for pattern forming TEM)

IT 78-10-4, Tetraethoxysilane 1185-55-3 3087-36-3,  
Tetraethoxytitanium 4253-34-3, Methyltriacetoxysilane  
**9016-00-6**, KF 96 13463-67-7, TA 15, uses  
**31900-57-9D**, Polydimethylsiloxane, hydroxy terminated  
**156327-07-0** 187112-15-8, CAT-PM6A 200513-73-1, Glasca  
HPC 7002 220355-74-8, CAT-PM 6B 220356-00-3, Glasca HPC 402H  
(photocatalyst contg. layer for pattern forming TEM)

L57 ANSWER 9 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

1998:21505 Document No. 128:121756 Positive image-forming composition.  
Kawamura, Koichi; Uenishi, Kazuya (Fuji Photo Film Co., Ltd.,  
Japan). Eur. Pat. Appl. EP 814381 A1 19971229, 49 pp. DESIGNATED  
STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,  
MC, PT, IE, FI. (English). CODEN: EPXXDW. APPLICATION: EP  
1997-110034 19970619. PRIORITY: JP 1996-160276 19960620; JP  
1996-190939 19960719.

AB A pos. image-forming compn. comprises (a) a compd. generating an  
acid by the action of light or heat and (b) at least one compd.  
selected from the N-sulfonylamide compds. represented by the formula  
 $L1(SO_2NR_2COR_1)_n$  or  $Li(CONR_2SO_2R_1)_n$  wherein n is an integer of from 1  
to 6,  $R_1$  represents an arom. group or an alkyl group,  $L_1$  represents  
an arom. group or an alkyl group when n is 1 or  $L_1$  represents a  
polyvalent linkage group constituted of nonmetal atoms when n is  
from 2 to 6, and  $R_2$  represents a tertiary alkyl group, an  
alkoxymethyl group, an arylmethyl group, or an alicyclic alkyl group  
or (c) a polymer having constitutional units represented by the  
formula  $-SO_2NR_3CO-$  wherein  $R_3$  represents a tertiary alkyl group, an  
alkoxymethyl group, an arylmethyl group, or an alicyclic alkyl  
group.

IT **201656-56-6**

(pos. photoresists contg.)

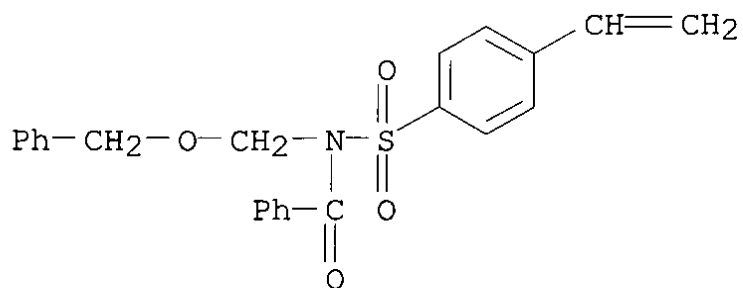
RN 201656-56-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester,  
polymer with N-[(4-ethenylphenyl)sulfonyl]-N-  
[(phenylmethoxy)methyl]benzamide (9CI) (CA INDEX NAME)

CM 1

CRN 201656-55-5

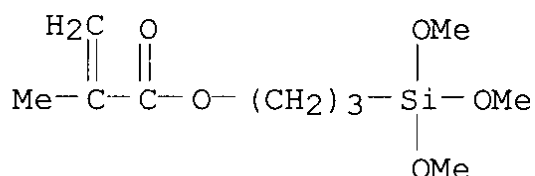
CMF C23 H21 N O4 S



CM 2

CRN 2530-85-0

CMF C10 H20 O5 Si



IT 201656-50-0P

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(prepn. and use in prepg. pos. photoresists)
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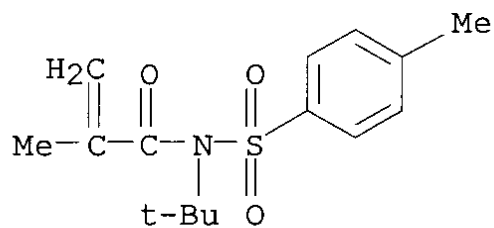
RN 201656-50-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-(trimethoxysilyl)propyl ester,  
polymer with N-(1,1-dimethylethyl)-2-methyl-N-[(4-  
methylphenyl)sulfonyl]-2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 201656-49-7

CMF C15 H21 N O3 S

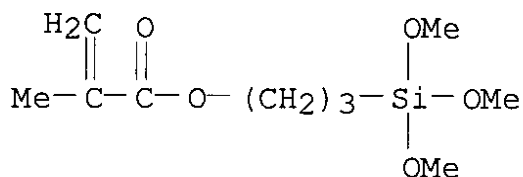




CM 2

CRN 2530-85-0

CMF C10 H20 O5 Si

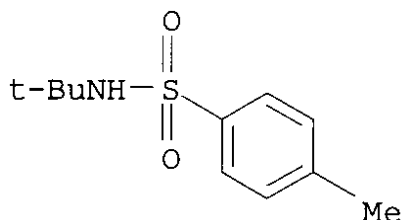


IT 2849-81-2

(reaction in prepg. photochem. acid generator for pos. photoresists)

RN 2849-81-2 HCAPLUS

CN Benzenesulfonamide, N-(1,1-dimethylethyl)-4-methyl- (9CI) (CA INDEX NAME)



IC ICM G03F007-004

ICS G03F007-039

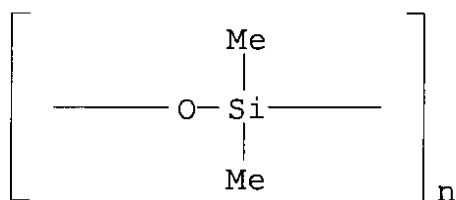
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT Positive **photoresists**

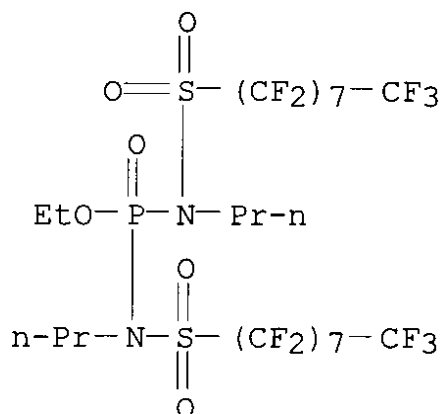
(contg. thermal or photochem. acid generators)

IT 201656-41-9 201656-43-1 201656-44-2 201656-45-3 201656-46-4  
201656-47-5(photochem. acid generator for pos. **photoresists**)IT 548-62-9, Crystal violet 27029-76-1, m-Cresol-p-cresol-  
formaldehyde copolymer 68541-73-1 201656-53-3 201656-54-4  
**201656-56-6** 201656-57-7 201656-59-9 201656-61-3  
201656-63-5 201656-65-7 201656-67-9 201656-68-0(pos. **photoresists** contg.)IT 77-58-7 85-44-9, 1,3-Isobenzofurandione 95-57-8, o-Chlorophenol  
22371-56-8, NK-3508 38686-70-3 69432-40-2 117283-53-1,  
Victoria Pure Blue BOH 1-naphthalenesulfonate  
(pos. **photoresists** contg. sulfonylamide photoacid)

- generators and)  
IT 201656-49-7P  
(prepn. and reaction in prepg. photochem. acid generator for pos.  
**photoresists**)  
IT 153698-69-2P 201656-52-2P  
(prepn. and use as dissoln. inhibitor for pos.  
**photoresists**)  
IT 201656-40-8P 201656-42-0P  
(prepn. and use as photochem. acid generator for pos.  
**photoresists**)  
IT 24979-70-2DP, Poly(p-hydroxystyrene), reaction products with tert-Bu  
bromoacetate 125325-82-8P 129674-22-2P, p-tert-  
Butoxycarbonyloxystyrene-p-hydroxystyrene copolymer  
**201656-50-0P** 201656-51-1P  
(prepn. and use in prepg. pos. **photoresists**)  
IT 76937-83-2,  $\alpha, \alpha, \alpha', \alpha', \alpha'', \alpha''$ -  
Hexakis(4-hydroxyphenyl)-1,3,5-triethylbenzene 110726-28-8,  
1-[ $\alpha$ -Methyl- $\alpha$ -(4'-hydroxyphenyl)ethyl]-4-  
[ $\alpha', \alpha'$ -bis(4''-hydroxyphenyl)ethyl]benzene  
(reaction in prepg. dissoln. inhibitor for pos.  
**photoresists**)  
IT 121-44-8, reactions 920-46-7, Methacrylic chloride  
**2849-81-2** 3587-60-8, Benzyl chloromethyl ether  
201656-48-6  
(reaction in prepg. photochem. acid generator for pos.  
**photoresists**)
- L57 ANSWER 10 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN  
1995:603759 Document No. 123:22355 Color filter for liquid crystal  
displays. Kimura, Kuniko; Matsumura, Nobuo; Nakahara, Reiko (Toray  
Industries, Japan). Jpn. Kokai Tokkyo Koho JP 07035916 A2 19950207  
Heisei, 14 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP  
1993-182761 19930723.
- AB In the title color filter obtained by forming a light-shielding  
black matrix in the space between the multicolor picture elements  
deposited on a support, the black matrix is a laminate of a  
non-light-shielding transparent resin layer on a light-shielding  
metal or black resin layer with the transparent resin layer contg.  
fine particles of a F compd. or silicone. The running and mixing of  
ink is prevented during the printing step(s) used in fabricating the  
color filter, and the occurrences of irregularities in film  
thickness and coloring can be avoided.
- IT **9016-00-6**, Poly(dimethylsiloxane) **132944-73-1**,  
EF-123A  
(black matrix for color filter contg.)  
RN 9016-00-6 HCAPLUS  
CN Poly[oxy(dimethylsilylene)] (8CI, 9CI) (CA INDEX NAME)



RN 132944-73-1 HCAPLUS

CN Phosphorodiamidic acid, N,N'-bis[(heptadecafluorooctyl)sulfonyl]-  
N,N'-dipropyl-, ethyl ester (9CI) (CA INDEX NAME)

IC ICM G02B005-20

ICS G02F001-1335

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)IT 9002-84-0, Teflon 9003-08-1, Sumitex M3 9016-00-6,  
Poly(dimethylsiloxane) 25085-99-8, R 140P 132944-73-1,  
EF-123A 150769-00-9, Megafac F 179 164108-69-4, Semicofine SP  
740

(black matrix for color filter contg.)

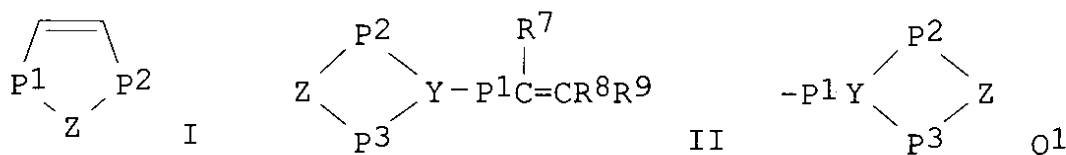
IT 15625-89-5 163673-93-6

(photoresist for color filter prodn. contg.)

L57 ANSWER 11 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

1995:226827 Document No. 122:20529 Positive-type photosensitive  
compositions. Aoso, Toshiaki; Mizutani, Kazuyoshi (Fuji Photo Film  
Co Ltd, Japan). Jpn. Kokai Tokkyo Koho JP 06011838 A2 19940121  
Heisei, 83 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP  
1991-12665 19910111.

GI



AB The aq. alkali-developable title compns. for lithog. plates, **resists**, etc., with good O plasma resistance comprise polysiloxanes contg.  $\geq 1$  mol% siloxane units formed by thermal cycloaddn. reaction of  $R1R2C:CR3C(SiX1X2X3):CR4R5$ ,  $R1R2C:CR3CR4:CR5SiX1X2X3$ ,  $R1R2C:CR3C(SiR6X1X2):CR4R5$ , or  $R1R2C:CR3CR4:CR5SiR6X1X2$  with  $QP1CR7:CR8R9$ , I, II, or  $QP1C.tplbond.CR9$ , (B) compds. having  $\geq 1$  acid-decomposable group and showing increased soly. in the alkali developer by acid, and (C) compds. producing acid upon light or radiation irradiation. In the formulas, R1-5 = H, (un)substituted alkyl, aryl, silyl, siloxy; R6 = H, (un)substituted alkyl, aryl,  $R1R2C:CR3C:CR4R5$ ,  $R1R2C:CR3CR4:CR5$ ; R7-9 = H, (un)substituted alkyl, aryl, alkoxy, cyano, nitro, -P1Q, Q1, optionally contg. O, CO, CO<sub>2</sub>, O<sub>2</sub>C, CONR10, NR10CO, SO<sub>2</sub>, SO<sub>3</sub>; R10 = H, (un)substituted alkyl, aryl; R7R8 or R7P1 may be ring member; X1-3 = hydroxy or hydrolyzable group; P1-3 = direct bond, (un)substituted alkylene, arylene, O, CO, CO<sub>2</sub>, O<sub>2</sub>C, CONR10, NR10CO, SO<sub>2</sub>, SO<sub>3</sub>; Y = trivalent arom. group; Q = acid group of pKa below 12; Z1 = C(R7)(P1Q), CONHCO, CON(OH)CO, CON(P1Q)CO, =Yn+2(P1Q)n; Yn+2 = (n + 2)-valent arom. group; n = 1-3.

IT **74508-34-2**, 4-Trimethylsilyloxystyrene homopolymer  
(in silsesquioxanes for photoresists and lithog. plates)

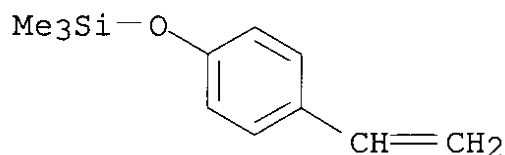
RN 74508-34-2 HCAPLUS

CN Silane, (4-ethenylphenoxy)trimethyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 58555-66-1

CMF C11 H16 O Si



IT 159440-41-2DP, reaction products with acetylenedicarboxylic acid 159448-33-6DP, reaction products with maleimide 159448-34-7DP, reaction products with (toluenesulfonyl)acrylamide (manuf. for **photoresists** and lithog. plates)

RN 159440-41-2 HCAPLUS

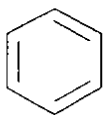
CN Silane, trimethoxy(1-methylene-2-propenyl)-, polymer with trimethoxy(methylphenyl)silane (9CI) (CA INDEX NAME)

CM 1

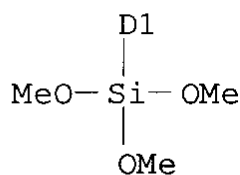
CRN 138746-39-1

CMF C10 H16 O3 Si

CCI IDS



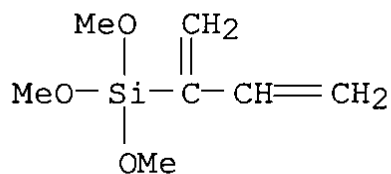
D1-Me



CM 2

CRN 93830-52-5

CMF C7 H14 O3 Si



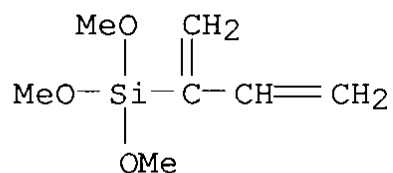
RN 159448-33-6 HCAPLUS

CN Silane, triethoxyphenyl-, polymer with trimethoxy(1-methylene-2-propenyl)silane (9CI) (CA INDEX NAME)

CM 1

CRN 93830-52-5

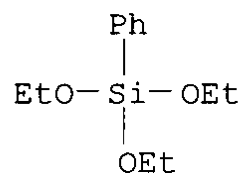
CMF C7 H14 O3 Si



CM 2

CRN 780-69-8

CMF C12 H20 O3 Si



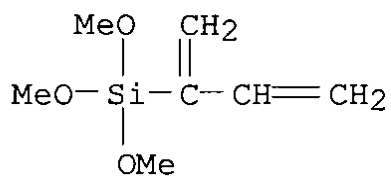
RN 159448-34-7 HCAPLUS

CN Silane, (4-chlorophenyl)trimethoxy-, polymer with trimethoxy(1-methylene-2-propenyl)silane (9CI) (CA INDEX NAME)

CM 1

CRN 93830-52-5

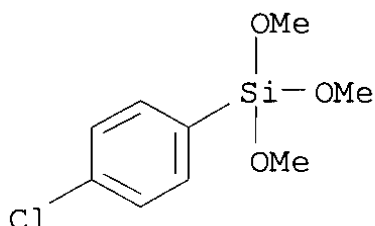
CMF C7 H14 O3 Si



CM 2

CRN 35692-30-9

CMF C9 H13 Cl O3 Si



IT **159519-43-4P 159519-44-5P**  
(pos.-type photoresists)

RN 159519-43-4 HCAPLUS

CN Poly[[1,3-bis[2,3,3a,4,7,7a-hexahydro-2-(hydroxyphenyl)-1,3-dioxo-1H-isoindol-4-yl]-1,3:1,3-disiloxanediylidene]-1,3-bis(oxy)] (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 159519-44-5 HCAPLUS

CN Poly[[1,3-bis[2-[(aminosulfonyl)phenyl]-2,3,3a,4,7,7a-hexahydro-1,3-dioxo-1H-isoindol-5-yl]-1,3:1,3-disiloxanediylidene]-1,3-bis(oxy)] (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT **104955-47-7, 2-(Trimethoxysilyl)-1,3-butadiene homopolymer**  
**159474-63-2**

(reaction with maleimide derivs.)

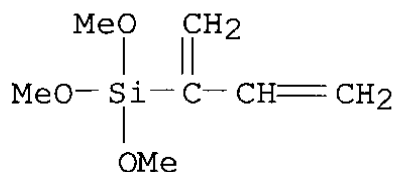
RN 104955-47-7 HCAPLUS

CN Silane, trimethoxy(1-methylene-2-propenyl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 93830-52-5

CMF C7 H14 O3 Si



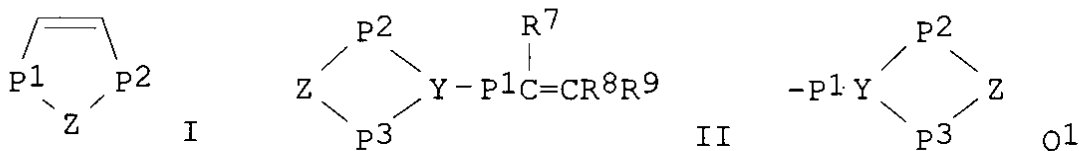




- IT **Resists**  
(photo-, **silsesquioxane**-based)
- IT **74508-34-2**, 4-Trimethylsilyloxystyrene homopolymer  
87261-04-9, Poly(4-tert-butoxycarbonyloxystyrene)  
(in **silsesquioxanes** for **photoresists** and  
lithog. plates)
- IT 541-59-3DP, Maleimide, reaction products with  
(trimethoxysilyl)butadiene-phenyltriethoxysilane  
**silsesquioxane**  
(manuf. for **photoresist** and lithog. plates)
- IT 142-45-0DP, Acetylenedicarboxylic acid, reaction products with  
(trimethoxysilyl)butadiene-tolyltrimethoxysilane  
**silsesquioxane** 2210-24-4DP, N-Phenylacrylamide, reaction  
products with **silsesquioxanes** 21282-96-2DP, reaction  
products with **silsesquioxanes** 131290-90-9DP, reaction  
products with **silsesquioxanes** 159440-41-2DP,  
reaction products with acetylenedicarboxylic acid  
**159448-33-6DP**, reaction products with maleimide  
**159448-34-7DP**, reaction products with  
(toluenesulfonyl)acrylamide  
(manuf. for **photoresists** and lithog. plates)
- IT **159519-43-4P** **159519-44-5P**  
(pos.-type **photoresists**)
- IT **104955-47-7**, 2-(Trimethoxysilyl)-1,3-butadiene homopolymer  
**159474-63-2**  
(reaction with maleimide derivs.)
- IT 7300-91-6, N-(p-Hydroxyphenyl)maleimide **7300-97-2**  
(reaction with **silsesquioxanes**)
- IT 69432-40-2P 91222-48-9P 141425-69-6P  
(**silsesquioxane** pos.-type **photoresists**  
contg.)
- IT 23928-87-2 74227-35-3 75482-18-7  
(**silsesquioxane** pos.-type **photoresists**  
contg.)

L57 ANSWER 12 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN  
1995:226826 Document No. 122:20528 Positive-type photosensitive  
compositions. Aoso, Toshiaki; Mizutani, Kazuyoshi (Fuji Photo Film  
Co Ltd, Japan). Jpn. Kokai Tokkyo Koho JP 06011837 A2 19940121  
Heisei, 63 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP  
1991-12521 19910111.

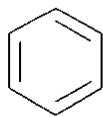
GI



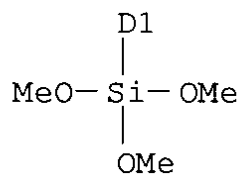
- AB The aq. alkali-developable title compns. for lithog. plates, **resists**, etc., with good O plasma resistance comprise polysiloxanes contg.  $\geq 1$  mol% siloxane units formed by thermal cycloaddn. reaction of  $R1R2C:CR3C(SiX1X2X3):CR4R5$ ,  $R1R2C:CR3CR4:CR5SiX1X2X3$ ,  $R1R2C:CR3C(SiR6X1X2):CR4R5$ , or  $R1R2C:CR3CR4:CR5SiR6X1X2$  with  $QP1CR7:CR8R9$ , I, II, or  $QP1C.tplbond.CR9$  and (B) 2-nitrobenzyl esters or sulfonate compds. or 2- or 3-alkoxybenzyl esters or sulfonate compds. In the formulas,  $R1-5 = H$ , (un)substituted alkyl, aryl, silyl, siloxy;  $R6 = H$ , (un)substituted alkyl, aryl,  $R1R2C:CR3C:CR4R5$ ,  $R1R2C:CR3CR4:CR5$ ;  $R7-9 = H$ , (un)substituted alkyl, aryl, alkoxy, cyano, nitro,  $-P1Q$ ,  $Q1$ , optionally contg. O, CO,  $CO2$ ,  $O2C$ ,  $CONR10$ ,  $NR10CO$ ,  $SO2$ ,  $SO3$ ;  $R10 = H$ , (un)substituted alkyl, aryl;  $R7R8$  or  $R7P1$  may be ring member;  $X1-3 =$  hydroxy or hydrolyzable group;  $P1-3 =$  direct bond, (un)substituted alkylene, arylene, O, CO,  $CO2$ ,  $O2C$ ,  $CONR10$ ,  $NR10CO$ ,  $SO2$ ,  $SO3$ ;  $Y =$  trivalent arom. group;  $Q =$  acid group of  $pK_a$  below 12;  $Z1 = C(R7)(P1Q)$ ,  $CONHCO$ ,  $CON(OH)CO$ ,  $CON(P1Q)CO$ ,  $=Y_{n+2}(P1Q)_n$ ;  $Y_{n+2} = (n + 2)$ -valent arom. group;  $n = 1-3$ .
- IT **159440-41-2DP**, reaction products with acetylenedicarboxylic acid **159448-33-6DP**, reaction products with maleimide **159448-34-7DP**, reaction products with (toluenesulfonyl)acrylamide (manuf. for **photoresists** and lithog. plates)
- RN 159440-41-2 HCAPLUS
- CN Silane, trimethoxy(1-methylene-2-propenyl)-, polymer with trimethoxy(methylphenyl)silane (9CI) (CA INDEX NAME)

CM 1

CRN 138746-39-1  
 CMF C10 H16 O3 Si  
 CCI IDS



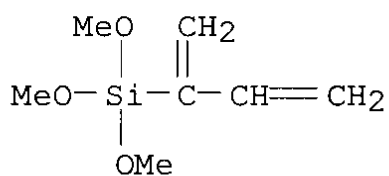
D1-Me



CM 2

CRN 93830-52-5

CMF C7 H14 O3 Si



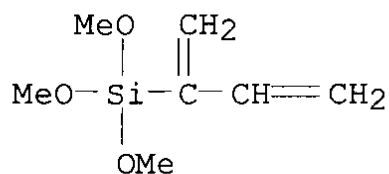
RN 159448-33-6 HCAPLUS

CN Silane, triethoxyphenyl-, polymer with trimethoxy(1-methylene-2-propenyl)silane (9CI) (CA INDEX NAME)

CM 1

CRN 93830-52-5

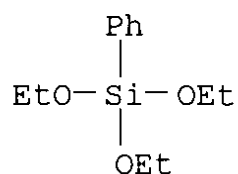
CMF C7 H14 O3 Si



CM 2

CRN 780-69-8

CMF C12 H20 O3 Si



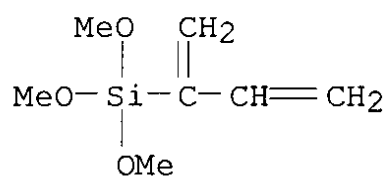
RN 159448-34-7 HCAPLUS

CN Silane, (4-chlorophenyl)trimethoxy-, polymer with  
 trimethoxy(1-methylene-2-propenyl)silane (9CI) (CA INDEX NAME)

CM 1

CRN 93830-52-5

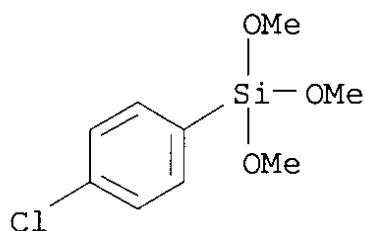
CMF C7 H14 O3 Si



CM 2

CRN 35692-30-9

CMF C9 H13 Cl O3 Si



IT 159519-43-4P 159519-44-5P  
(pos.-type photoresists)

RN 159519-43-4 HCAPLUS

CN Poly[[1,3-bis[2,3,3a,4,7,7a-hexahydro-2-(hydroxyphenyl)-1,3-dioxo-1H-isoindol-4-yl]-1,3:1,3-disiloxanediylidene]-1,3-bis(oxy)] (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 159519-44-5 HCAPLUS

CN Poly[[1,3-bis[2-[(aminosulfonyl)phenyl]-2,3,3a,4,7,7a-hexahydro-1,3-dioxo-1H-isoindol-5-yl]-1,3:1,3-disiloxanediylidene]-1,3-bis(oxy)] (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT 104955-47-7, 2-(Trimethoxysilyl)-1,3-butadiene homopolymer  
159474-63-2

(reaction with maleimide derivs.)

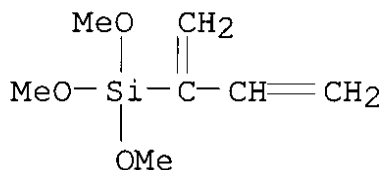
RN 104955-47-7 HCAPLUS

CN Silane, trimethoxy(1-methylene-2-propenyl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

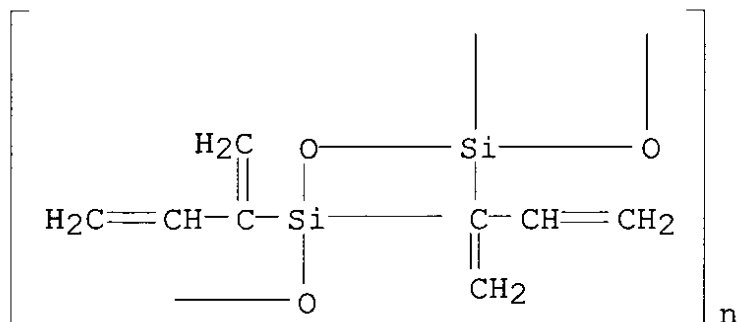
CRN 93830-52-5

CMF C7 H14 O3 Si



RN 159474-63-2 HCAPLUS

CN Poly[[1,3-bis(1-methylene-2-propenyl)-1,3:1,3-disiloxanediylidene]-1,3-bis(oxy)] (9CI) (CA INDEX NAME)

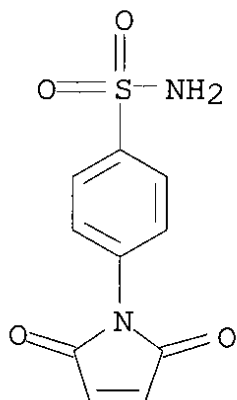


IT 7300-97-2

(reaction with silsesquioxanes)

RN 7300-97-2 HCAPLUS

CN Benzenesulfonamide, 4-(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)- (9CI)  
(CA INDEX NAME)



IC ICM G03F007-075

ICS G03F007-004; G03F007-039; H01L021-027

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST silsesquioxane photoresist nitrobenzyl ester;  
alkoxybenzyl ester silsesquioxane photoresist;  
lithog plate silsesquioxane

IT Silsesquioxanes  
(photoresists and lithog. plates)

IT Lithographic plates  
(**silsesquioxane**-based)

IT Resists  
(photo-, silsesquioxane-based)

IT 146227-70-5P 159448-35-8P  
(in silsesquioxane-based photoresists and

- lithog. plates)
- IT 541-59-3DP, Maleimide, reaction products with (trimethoxysilyl)butadiene-phenyltriethoxysilane **silsesquioxane** (manuf. for **photoresist** and lithog. plates)
- IT 142-45-0DP, Acetylenedicarboxylic acid, reaction products with (trimethoxysilyl)butadiene-tolyltrimethoxysilane **silsesquioxane** 2210-24-4DP, N-Phenylacrylamide, reaction products with **silsesquioxanes** 21282-96-2DP, reaction products with **silsesquioxanes** 131290-90-9DP, reaction products with **silsesquioxanes** 159440-41-2DP, reaction products with acetylenedicarboxylic acid **159448-33-6DP**, reaction products with maleimide **159448-34-7DP**, reaction products with (toluenesulfonyl)acrylamide (manuf. for **photoresists** and lithog. plates)
- IT **159519-43-4P 159519-44-5P** (pos.-type **photoresists**)
- IT **104955-47-7**, 2-(Trimethoxysilyl)-1,3-butadiene homopolymer **159474-63-2** (reaction with maleimide derivs.)
- IT 7300-91-6, N-(p-Hydroxyphenyl)maleimide **7300-97-2** (reaction with **silsesquioxanes**)
- IT 145706-02-1P 145706-03-2P 159448-32-5P (**silsesquioxane** pos.-type **photoresists** contg.)
- IT 80500-54-5 145706-09-8 159448-36-9 159448-37-0 (**silsesquioxane** pos.-type **photoresists** contg.)

L57 ANSWER 13 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN 1992:501049 Document No. 117:101049 Chemical-amplification-type **photoresist** composition. Urano, Fumiyoshi; Nakahata, Masaaki; Fujie, Hirotooshi; Oono, Keiji (Wako Pure Chemical Industries, Ltd., Japan). Eur. Pat. Appl. EP 476865 A1 19920325, 32 pp. DESIGNATED STATES: R: DE, FR, GB, IT, NL. (English). CODEN: EPXXDW. APPLICATION: EP 1991-307908 19910829. PRIORITY: JP 1990-230185 19900831.

GI For diagram(s), see printed CA Issue.

AB A chem.-amplification-type **photoresist** compn., which is excellent in heat resistance and adhesiveness to a substrate and capable of maintaining stable pattern dimension from exposure to light to heat treatment and readily forms patterns using deep UV or KrF excimer laser, comprises a copolymer represented by the formula I (R1 = tetrahydroxypyranlyl, trimethylsilyl, II, where p = an integer of 4 or 5, or C(Me)(R14)OR15, where R14 = H, Me, or Et; R15 = C1-6 alkyl; R2-5 = H or C1-8 alkyl; R6-13 = H or C1-6 alkyl; K, j = a natural no. with  $K/(K + j) = 0.1-0.9$ ; m, n = an integer of 0-3),

a photosensitive compd. capable of generating an acid upon exposure to light and represented by the formula III (R16-21 = H, halogen, C1-10 alkyl, or alkoxy; X- = perchlorate ion, p-toluenesulfonate ion, or trifluoromethanesulfonate ion), and a solvent for dissolving I and III.

IT 142940-46-3

(chem.-amplification **photoresist** compns. contg. photosensitive acid-generating compds. and)

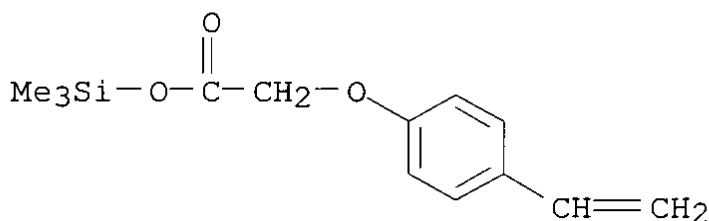
RN 142940-46-3 HCAPLUS

CN Acetic acid, (4-ethenylphenoxy)-, trimethylsilyl ester, polymer with 4-ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 142940-45-2

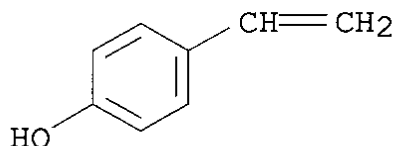
CMF C13 H18 O3 Si



CM 2

CRN 2628-17-3

CMF C8 H8 O



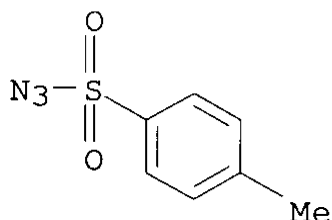
IT 941-55-9P, p-Toluenesulfonylazide

(prepn. and reaction of, in prep. photosensitive acid-generating agent for chem.-amplification **photoresist** compns.)

RN 941-55-9 HCAPLUS

CN Benzenesulfonyl azide, 4-methyl- (9CI) (CA INDEX NAME)





- IC ICM G03F007-039  
ICS G03F007-075
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST **photoresist** chem amplification methylcycloalkyl ethenylphenoxyacetate copolymer; hydroxystyrene copolymer chem amplification **photoresist**
- IT **Resists**  
(photo-, chem.-amplification, contg. Me cycloalkyl ethenyl phenoxy acetate-hydroxystyrene copolymers and photosensitive acid-generating compds.)
- IT 142940-36-1 142940-38-3 142940-40-7 142940-42-9 142940-44-1  
**142940-46-3** 142952-62-3  
(chem.-amplification **photoresist** compns. contg. photosensitive acid-generating compds. and)
- IT 14159-45-6 56817-85-7 74074-84-3 138529-83-6,  
Bis(isopropylsulfonyl)diazomethane 138529-84-7,  
Bis(tert-butylsulfonyl)diazomethane 138529-91-6 142909-01-1  
(photosensitive acid-generating agents, chem.-amplification. **photoresist** compns.)
- IT **941-55-9P**, p-Toluenesulfonylazide 1125-71-9P 1127-39-5P  
15310-28-8P  
(prepn. and reaction of, in prepg. photosensitive acid-generating agent for chem.-amplification **photoresist** compns.)
- IT 18293-71-5P 24979-70-2P, Poly(4-hydroxystyrene) 50907-55-6P  
74266-27-6P 121669-92-9P 142909-02-2P 142909-03-3P  
142909-04-4P  
(prepn. and reaction of, in prepn. of copolymers for chem.-amplification **photoresist** compns.)
- L57 ANSWER 14 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN  
1991:523876 Document No. 115:123876 Radiation-sensitive polymerizing compositions. Tomikawa, Masao; Eguchi, Masuichi (Toray Industries, Inc., Japan). Jpn. Kokai Tokkyo Koho JP 03037652 A2 19910219 Heisei, 10 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1989-173649 19890704.
- AB The title compns. contain (a) polymers mainly having units -COZ(CO<sub>2</sub>R)<sub>n</sub>CONHZ<sub>1</sub>NH- (Z = C≥2 tri- or tetravalent group; Z<sub>1</sub> =

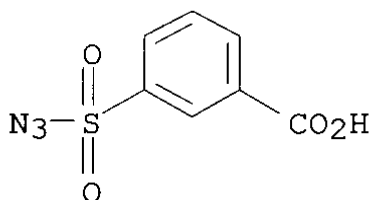
C $\geq$ 2 divalent group; R = H, alkali metal cation; n = 1, 2), (b) unsatd. compds. with amino or quaternized amino group, polymerizable or dimerizable by radiation, (c) arom. alcs. with secondary or tertiary amino groups, in which ketone groups are not in direct bonding with arom. nuclei having amino groups, (d) arom. azides and/or arom. sulfonazides, (e) 3,3',4,4'-tetra(tert-butylperoxycarbonyl)benzophenone, and (f) nitrosoamines. These compns. have high sensitivity, esp. when g-line stepper is used for patterning exposure. Thus, a soln. contg. 4,4'-diaminodiphenyl sulfide 207.65, 1,3-bis(3-aminopropyl)tetramethyldisiloxane 9.94, and pyromellitic anhydride 213.76 g in N-methylpyrrolidone was warmed to obtain a polymer soln., which was mixed with diethylaminoethyl methacrylate 370, N-phenyldiethanolamine 8.63, 4-azidobenzalacetophenone 17.25, 3,3',4,4'-tetra(tert-butylperoxycarbonyl)benzophenone 17.25, and ammonium nitrosophenyl hydroxylamine 2.15 g and applied on Si wafer and dried to form a 10- $\mu$ m-thick layer. Exposure to 436-nm UV (5 mW/cm<sup>2</sup>) and development with 7:3 N-methylpyrrolidone-2-propanol mixt. gave pattern with 8- $\mu$ m-thick pattern. The pattern was treated at 250° and at 350°, and surface without roughness was obtained when the exposure exceeded 200 mJ.

IT 15980-11-7

(polyamic acid-contg. radiation **resists** contg.)

RN 15980-11-7 HCAPLUS

CN Benzoic acid, 3-(azidosulfonyl)- (9CI) (CA INDEX NAME)



IT 82530-51-6 135583-48-1 135699-56-8

(radiation **resists** contg., high-sensitivity)

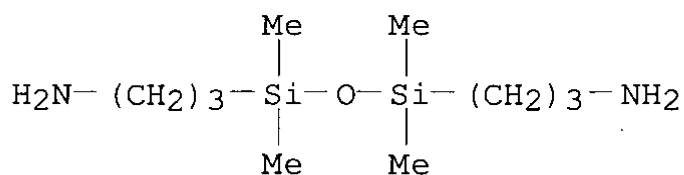
RN 82530-51-6 HCAPLUS

CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with 4,4'-oxybis[benzenamine] and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

CM 1

CRN 2469-55-8

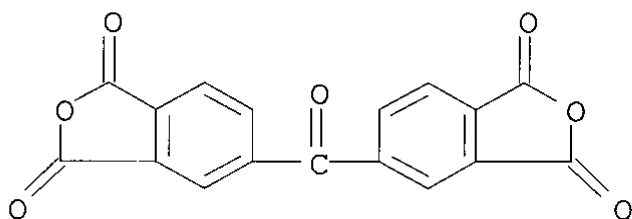
CMF C10 H28 N2 O Si2



CM 2

CRN 2421-28-5

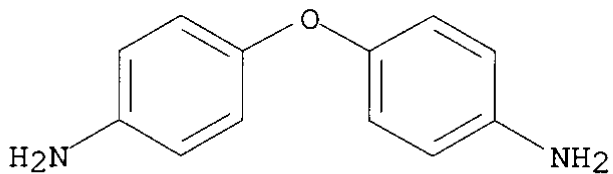
CMF C17 H6 O7



CM 3

CRN 101-80-4

CMF C12 H12 N2 O



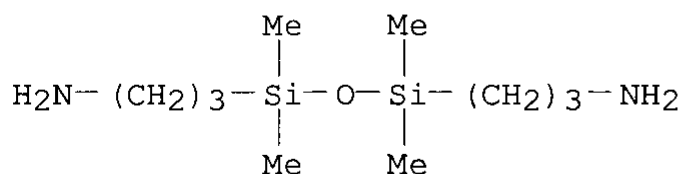
RN 135583-48-1 HCAPLUS

CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with  
3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] and  
4,4'-thiobis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 2469-55-8

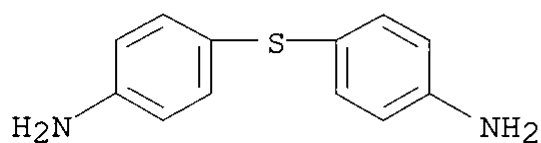
CMF C10 H28 N2 O Si2



CM 2

CRN 139-65-1

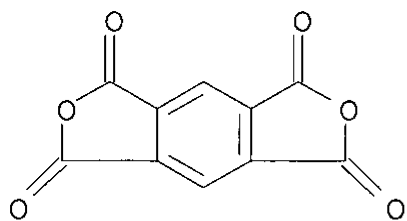
CMF C12 H12 N2 S



CM 3

CRN 89-32-7

CMF C10 H2 O6



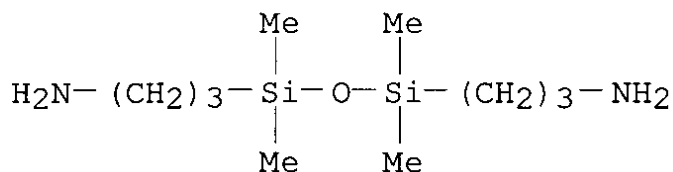
RN 135699-56-8 HCAPLUS

CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with  
 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] and  
 4,4'-thiobis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 2469-55-8

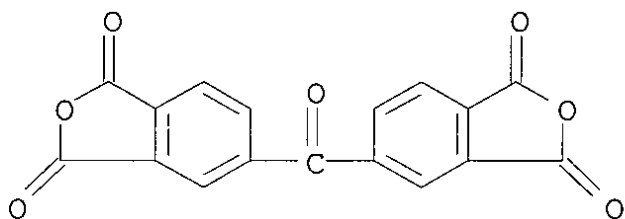
CMF C10 H28 N2 O Si2



CM 2

CRN 2421-28-5

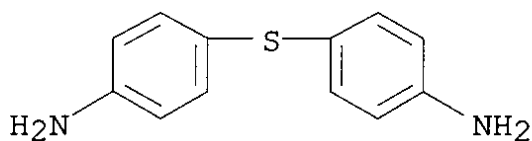
CMF C17 H6 O7



CM 3

CRN 139-65-1

CMF C12 H12 N2 S



IC ICM G03F007-022  
 ICS C08K005-17; C08K005-28; C08K005-32; C08L079-08; G03F007-031;  
 G03F007-037

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and  
 Other Reprographic Processes)

ST radiation **resist** polyamic acid

IT Polyamic acids  
 (radiation **resists** contg., high-sensitivity)

IT **Resists**  
 (radiation-sensitive, polyamic acid-contg., high-sensitivity, for  
 exposure with g-line)

IT 105-16-8, Diethylaminoethyl methacrylate 120-07-0,

N-Phenyldiethanolamine 135-20-6 **15980-11-7** 41657-71-0,  
4-Azidobenzalacetophenone 77473-08-6, 3,3',4,4'-Tetra(tert-  
butylperoxycarbonyl)benzophenone

(polyamic acid-contg. radiation **resists** contg.)

IT **82530-51-6 135583-48-1 135699-56-8**

(radiation **resists** contg., high-sensitivity)

L57 ANSWER 15 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

1991:472943 Document No. 115:72943 Chemical ray-curable polyamide  
compositions. Tomikawa, Masao; Eguchi, Masuichi (Toray Industries,  
Inc., Japan). Jpn. Kokai Tokkyo Koho JP 03039357 A2 19910220  
Heisei, 9 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP  
1989-174805 19890705.

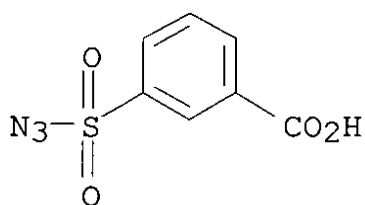
AB Title compns. with good curability and useful for  
**photoresists**, comprise (a) polymers derived from C $\geq$ 2  
hydrocarbylene tri- (or tetra)carboxylic acids or salts and  
C $\geq$ 2 hydrocarbylene diamines; (b) coumarin compds. bearing a  
C $\geq$ 3 monovalent org. group and a C $\geq$ 2 org. tert-amino  
group on position 3 and 7, resp.; (c) chem. ray-initiated  
dimerizable and polymerizable compds. contg. unsatd. groups and  
amino groups or their quaternary salts; (d) 3,3',4,4'-tetra(tert-Bu  
peroxycarbonyl)benzophenone (I), and nitroso amines. Thus, a soln.  
of 4,4'-diaminodiphenylsulfide 207.65, and 1,3-bis(3-  
aminopropyl)tetramethyldisiloxane 9.94 in N-methyl-2-pyrrolidone  
(II) 1530 was combined with pyromellitic anhydride 213.76 g, heated  
3 h at 50°, mixed with diethylaminoethyl methacrylate 370,  
N-phenyldiethanolamine 8.63, 4-azidobenzalacetophenone 17.25, and I  
17.25 dissolved in II 250 g, spun-coated on a Si wafer, and dried to  
give a 10- $\mu$ m film. The film was then irradiated by a  
high-pressure Hg-lamp for 2 min, developed with 70:30 II-xylene  
mixts., rinsed 20s with iso-PrOH, and spin-dried to give a 8.0- $\mu$ m  
film with even thickness.

IT **15980-11-7**

(initiators, for **photoresists**)

RN 15980-11-7 HCAPLUS

CN Benzoic acid, 3-(azidosulfonyl)- (9CI) (CA INDEX NAME)



IT **134979-58-1 134979-59-2 134979-60-5**

(**photoresists**, initiators for improving curability of)

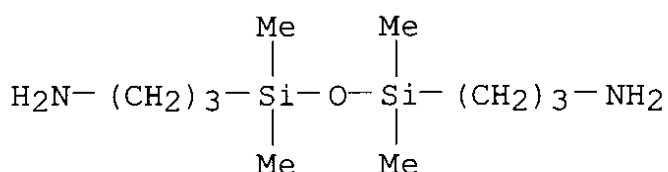
RN 134979-58-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(diethylamino)ethyl ester, polymer  
with 1H,3H-benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone,  
2,2'-(phenylimino)bis[ethanol], 3,3'-(1,1,3,3-tetramethyl-1,3-  
disiloxanediyl)bis[1-propanamine] and 4,4'-thiobis[benzenamine]  
(9CI) (CA INDEX NAME)

CM 1

CRN 2469-55-8

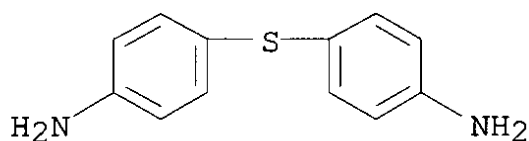
CMF C10 H28 N2 O Si2



CM 2

CRN 139-65-1

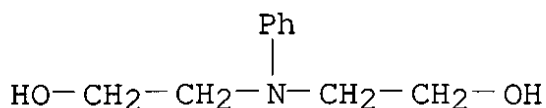
CMF C12 H12 N2 S



CM 3

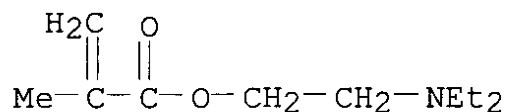
CRN 120-07-0

CMF C10 H15 N O2



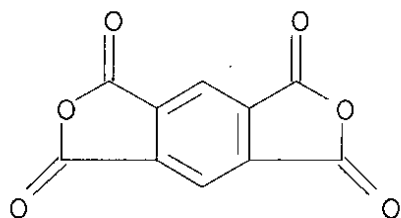
CM 4

CRN 105-16-8  
CMF C10 H19 N O2



CM 5

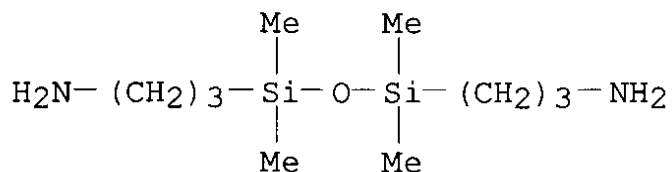
CRN 89-32-7  
CMF C10 H2 O6



RN 134979-59-2 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 2-(diethylamino)ethyl ester, polymer with 5,5'-carbonylbis[1,3-isobenzofurandione], 4,4'-oxybis[benzenamine], 2,2'-(phenylimino)bis[ethanol] and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine] (9CI) (CA INDEX NAME)

CM 1

CRN 2469-55-8  
CMF C10 H28 N2 O Si2

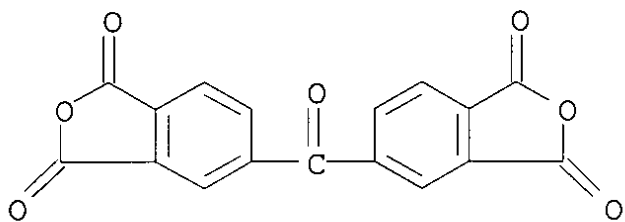


CM 2

CRN 2421-28-5



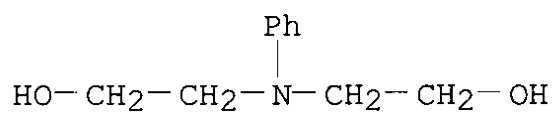
CMF C17 H6 O7



CM 3

CRN 120-07-0

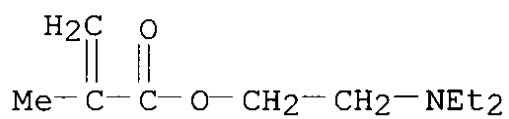
CMF C10 H15 N O2



CM 4

CRN 105-16-8

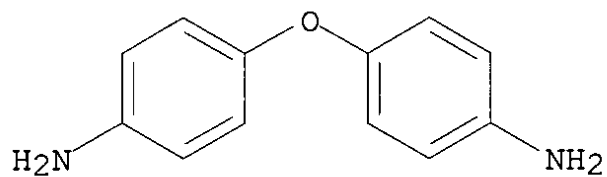
CMF C10 H19 N O2



CM 5

CRN 101-80-4

CMF C12 H12 N2 O



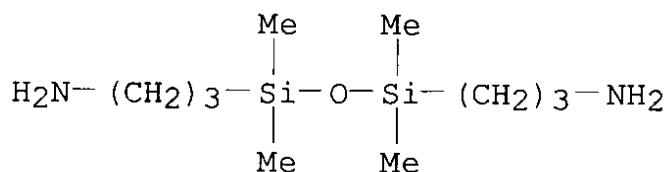
RN 134979-60-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(diethylamino)ethyl ester, polymer  
with 5,5'-carbonylbis[1,3-isobenzofurandione], 2,2'-  
(phenylimino)bis[ethanol], 3,3'-(1,1,3,3-tetramethyl-1,3-  
disiloxanediyl)bis[1-propanamine] and 4,4'-thiobis[benzenamine]  
(9CI) (CA INDEX NAME)

CM 1

CRN 2469-55-8

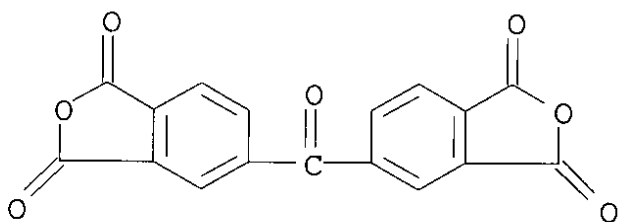
CMF C10 H28 N2 O Si2



CM 2

CRN 2421-28-5

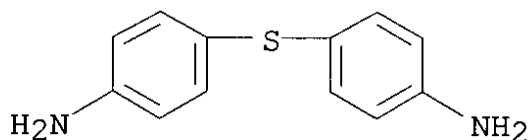
CMF C17 H6 O7



CM 3

CRN 139-65-1

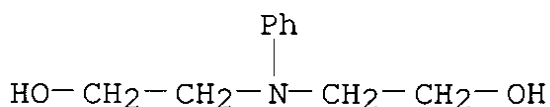
CMF C12 H12 N2 S



CM 4

CRN 120-07-0

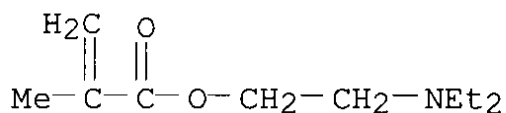
CMF C10 H15 N O2



CM 5

CRN 105-16-8

CMF C10 H19 N O2



IC ICM C08L079-08

ICS C08K005-07; C08K005-15; C08K005-17; C08K005-32; G03F007-031;  
G03F007-037; H01L021-027CC 37-3 (Plastics Manufacture and Processing)  
Section cross-reference(s): 74ST acrylate polyamic polyimide **photoresist** curability;  
coumarin initiator polyimide **photoresist** curability;  
benzophenone initiator polyimide **photoresist** curability;  
nitroso polyamic polyimide **photoresist** curability; azide  
initiator polyimide **photoresist** curabilityIT Azides  
(initiators, for **photoresists** based on crosslinkable  
acrylic polyamic acid-polyimides)IT Polyimides, uses and miscellaneous  
(**photoresists**, initiators for improving curability of)IT **Resists**  
(photo-, neg.-working, acrylic polyamic acid-polyimides for,  
photoinitiators for improving curability of)IT Crosslinking catalysts  
(photochem., nitrosoamines and benzophenones, for  
**photoresists** based on hydroxy-crosslinkable acrylic  
polyamic acid-polyimides)

IT 91-64-5D, Coumarin, compds. 15980-11-7 41657-71-0,

4-Azidobenzalacetophenone 77473-08-6, 3,3',4,4'-Tetra(tert-butylperoxycarbonyl)benzophenone  
(initiators, for **photoresists**)

IT 134979-58-1 134979-59-2 134979-60-5  
(**photoresists**, initiators for improving curability of)

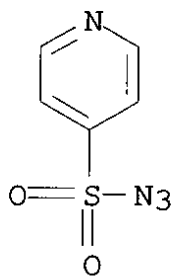
L57 ANSWER 16 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN  
1983:63330 Document No. 98:63330 Light or radiation-sensitive imaging polymer composition and its application.. Kataoka, Fumio; Shoji, Fusaji; Obara, Isao; Yokono, Hitoshi; Isogai, Tokio; Kojima, Mitumasa (Hitachi, Ltd., Japan; Hitachi Chemical Co., Ltd.). Fr. Demande FR 2496111 A1 19820618, 86 pp. (French). CODEN: FRXXBL. APPLICATION: FR 1981-23637 19811217. PRIORITY: JP 1980-177200 19801217; JP 1981-96489 19810624; JP 1981-96493 19810624; JP 1981-96494 19810624; JP 1981-165806 19811019.

AB Imaging compns., which are light- and radiation-sensitive, are comprised of a poly(amic acid) and  $\geq 1$  compd. contg. an amino group and an arom. azide or arom. sulfonylazide group in its mol. Thus, 20 g of a soln. contg. the reaction product of 4,4'-diaminodiphenyl ether 100 and pyromellitic acid dianhydride 109 in N-methyl-2-pyrrolidone 79 g was combined with 2.34 g 2-(N,N-dimethylamino)ethyl p-azidobenzoate, filtered under pressure through a filter of 5  $\mu$ m mesh size, coated on a Si support to a dry thickness of 2.6  $\mu$ m, covered with a **mask**, UV exposed using a 500-W Xe-Hg lamp, and developed with a 4:1 by vol. soln. of dimethylacetamide and EtOH.

IT 84356-57-0 84356-59-2  
(photoimaging compn. contg. poly(amic acid) and)

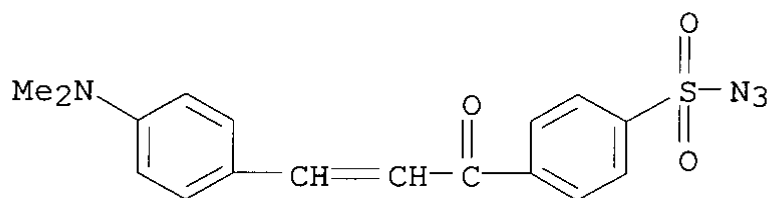
RN 84356-57-0 HCAPLUS

CN 4-Pyridinesulfonyl azide (9CI) (CA INDEX NAME)

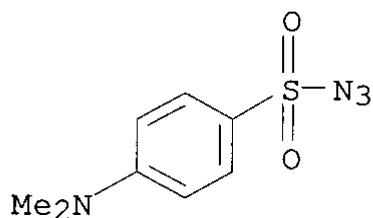


RN 84356-59-2 HCAPLUS

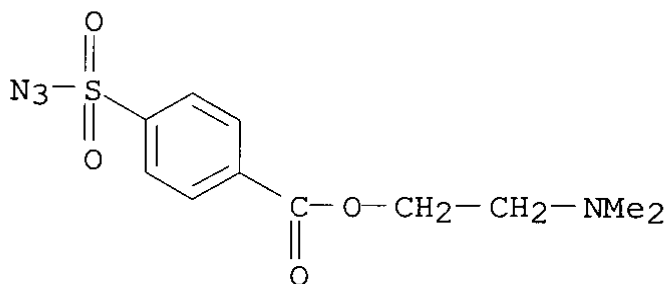
CN Benzenesulfonyl azide, 4-[3-[4-(dimethylamino)phenyl]-1-oxo-2-propenyl]- (9CI) (CA INDEX NAME)



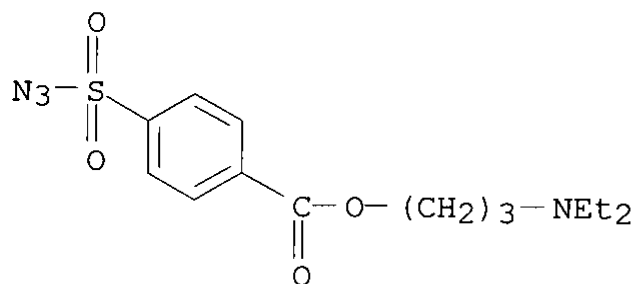
IT 38240-52-7 84356-53-6 84356-56-9  
 (photoimaging polymer compn. contg. poly(amic acid) and)  
 RN 38240-52-7 HCAPLUS  
 CN Benzenesulfonyl azide, 4-(dimethylamino)- (9CI) (CA INDEX NAME)



RN 84356-53-6 HCAPLUS  
 CN Benzoic acid, 4-(azidosulfonyl)-, 2-(dimethylamino)ethyl ester (9CI)  
 (CA INDEX NAME)



RN 84356-56-9 HCAPLUS  
 CN Benzoic acid, 4-(azidosulfonyl)-, 3-(diethylamino)propyl ester (9CI)  
 (CA INDEX NAME)



IT 82370-41-0

(photoimaging polymeric compn. contg. arom. azide and)

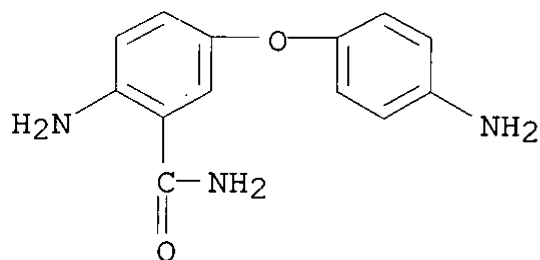
RN 82370-41-0 HCAPLUS

CN Benzamide, 2-amino-5-(4-aminophenoxy)-, polymer with  
 1H,3H-benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone,  
 5,5'-carbonylbis[1,3-isobenzofurandione], 4,4'-oxybis[benzenamine]  
 and 3,3'-(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis[1-propanamine]  
 (9CI) (CA INDEX NAME)

CM 1

CRN 40763-98-2

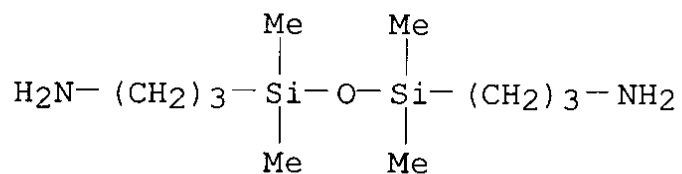
CMF C13 H13 N3 O2



CM 2

CRN 2469-55-8

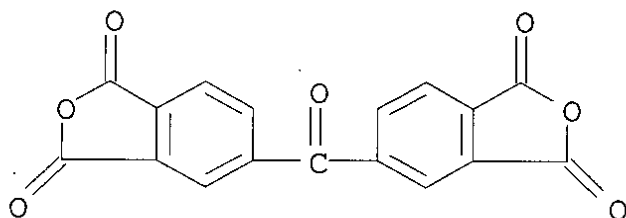
CMF C10 H28 N2 O Si2



CM 3

CRN 2421-28-5

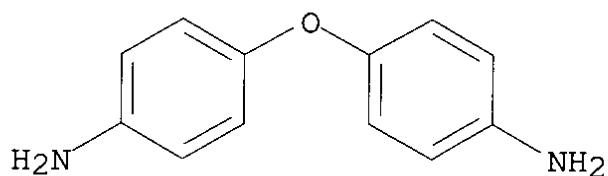
CMF C17 H6 O7



CM 4

CRN 101-80-4

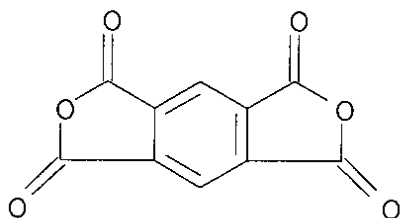
CMF C12 H12 N2 O



CM 5

CRN 89-32-7

CMF C10 H2 O6



- IC C08L079-08; C07C117-08; C07C161-00; C08K005-28; C08K005-43;  
G03C001-72
- CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and  
Other Reprographic Processes)
- IT **Resists**  
(photo-, polymeric, contg. poly(amic acid) and arom. azide or  
arom. sulfonyl azide compd.)
- IT 27934-69-6 **84356-57-0** 84356-58-1 **84356-59-2**  
84356-60-5 84356-69-4 84356-70-7 84389-36-6  
(photoimaging compn. contg. poly(amic acid) and)
- IT 18523-44-9 **38240-52-7** 39910-67-3 **84356-53-6**  
84356-54-7 84356-55-8 **84356-56-9**  
(photoimaging polymer compn. contg. poly(amic acid) and)
- IT 24980-39-0 25085-92-1 25668-07-9 25821-35-6 28157-64-4  
55478-71-2 **82370-41-0**  
(photoimaging polymeric compn. contg. arom. azide and)
- L57 ANSWER 17 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN  
1983:5047 Document No. 98:5047 Siloxanes. Berger, Abe (M and T  
Chemicals Inc., USA). Eur. Pat. Appl. EP 54426 A2 19820623, 290  
pp. DESIGNATED STATES: R: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE.  
(English). CODEN: EPXXDW. APPLICATION: EP 1981-305864 19811214.  
PRIORITY: US 1980-216599 19801215.
- AB Monomers or polymers contg. the linkage  
ZZ1Z2SiR2(OSiR12)x(OSiR2R3)y(OSiR4R5)xOSiR2Z2Z1Z (Z = substituted or  
unsubstituted arom. compd.; Z1 = O, S, SO, SO2, SO2NH, NHSO2, CONH,  
NHCO, CO2, O2C; Z2 = substituted or unsubstituted hydrocarbylene; R,  
R1, R2, R3, R4, R5 = substituted or unsubstituted hydrocarbyl; x, y,  
z = 0-100) were prepd. and used in modification of polyimides and  
other polymers. Thus, a mixt. consisting of 50% aq. NaOH 43.28,  
DMSO 112, PhMe 120, and p-aminophenyl [123-30-8] 59.95 parts was  
heated under N, azeotropically distd. to removed water, stirred 7-8  
h while the temp. increased to 122°, cooled to  
.apprx.80°, treated with 86.6 parts  
bis(chlorobutyl)tetramethyldisiloxane [72066-91-2] dropwise to  
maintain the reaction temp. at .apprx.80°, heated .apprx.16 h  
at 80°, and distd. at 295-300° at 0.5-2 mm Hg to give  
bis(p-aminophenoxybutyl)tetramethyldisiloxane (I) [72066-92-3]  
which was a colorless liq. which eventually solidified to a white

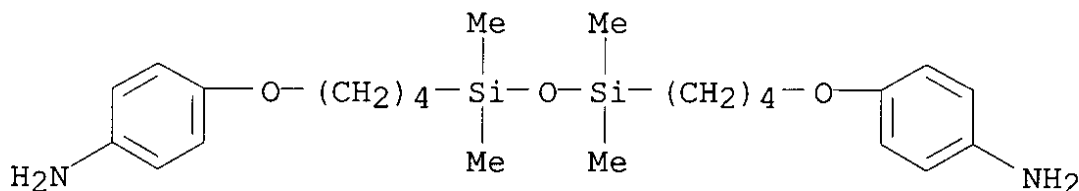


IT      83874-52-6   83874-93-5   83874-94-6  
          83874-95-7   83874-97-9   83891-18-3  
          83891-20-7   83891-21-8   83891-23-0  
          83891-26-3   83891-28-5   83891-29-6  
          83891-44-5   83900-13-4   83900-14-5  
          83945-26-0   83945-27-1   83945-28-2  
          83945-29-3   83946-33-2

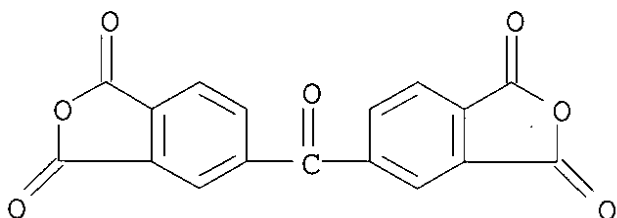
RN 83874-52-6 HCAPLUS

CM 1

CMF C24 H40 N2 O3 Si2



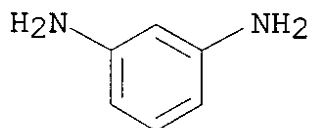
CMF C17 H6 O7



CM 3

CRN 108-45-2

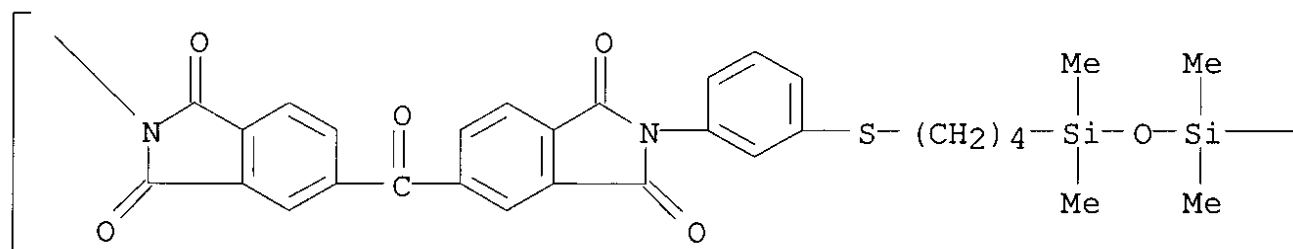
CMF C6 H8 N2



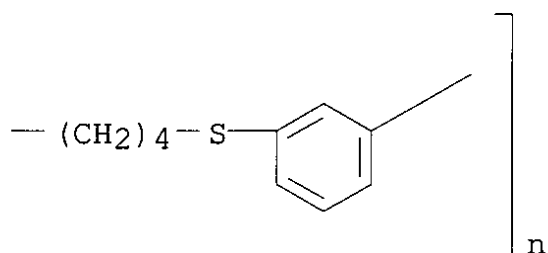
RN 83874-93-5 HCAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,3-phenylenethio-1,4-butanediyl(1,1,3,3-tetramethyl-1,3-disiloxanediyl)-1,4-butanediylthio-1,3-phenylene] (9CI) (CA INDEX NAME)

PAGE 1-A



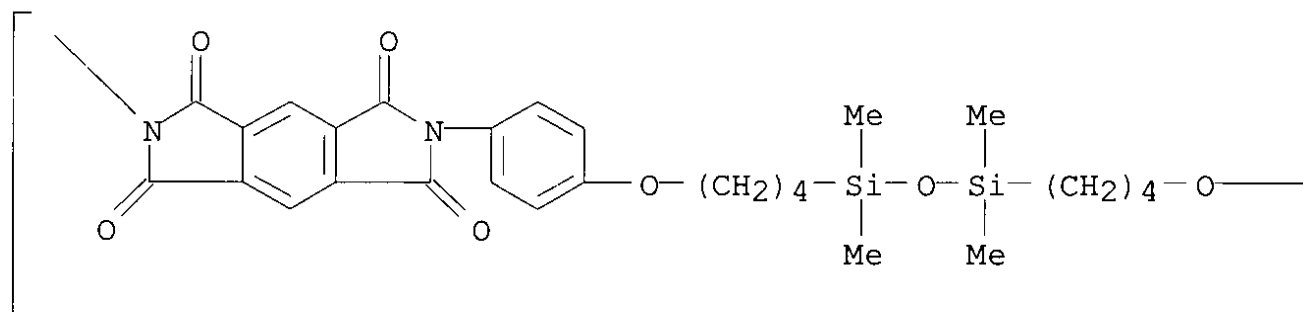
PAGE 1-B



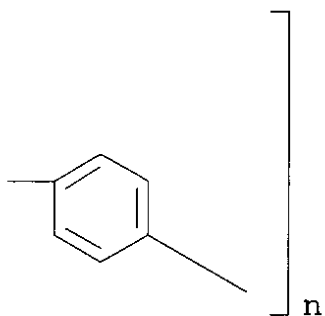
RN 83874-94-6 HCAPLUS

CN Poly[(5,7-dihydro-1,3,5,7-tetraoxobenzo[1,2-c:4,5-c']dipyrrole-2,6(1H,3H)-diyl)-1,4-phenyleneoxy-1,4-butanediyl(1,1,3,3-tetramethyl-1,3-disiloxanediyl)-1,4-butanediyl-1,4-phenylene] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

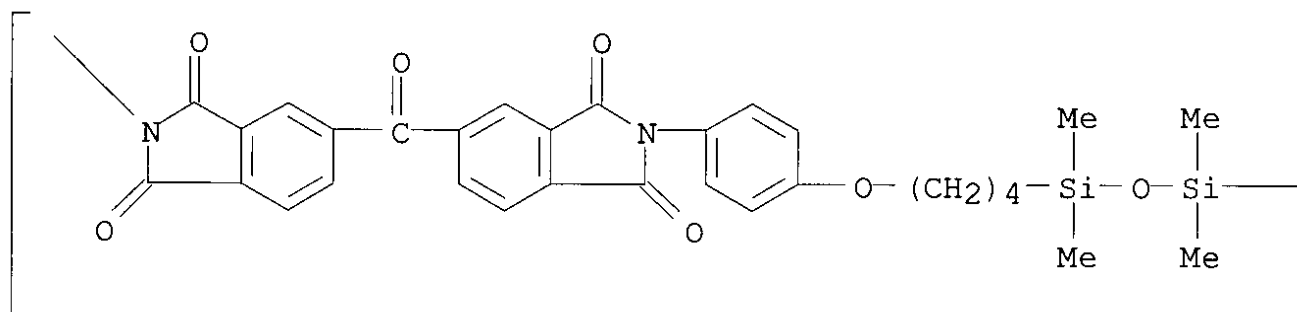


RN 83874-95-7 HCAPLUS

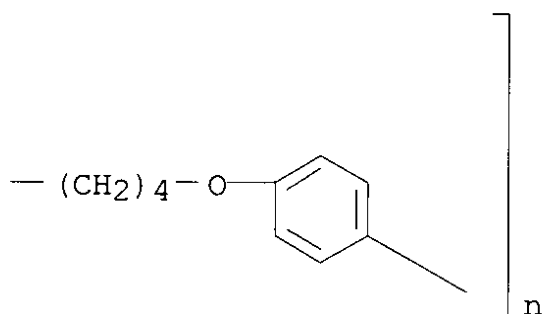
CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyl(1,3-

dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenyleneoxy-1,4-butanediyl(1,1,3,3-tetramethyl-1,3-disiloxanediyl)-1,4-butanediyl-1,4-phenylene] (9CI) (CA INDEX NAME)

PAGE 1-A



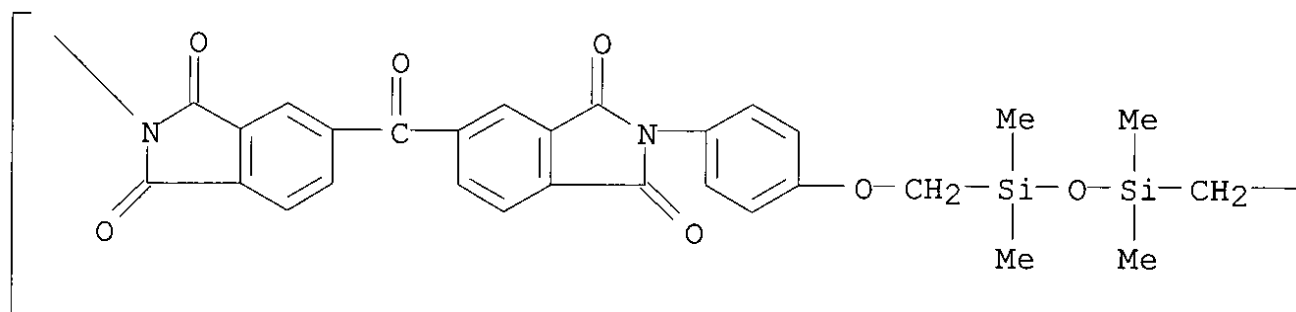
PAGE 1-B



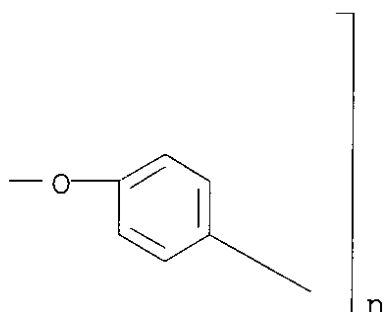
RN 83874-97-9 HCAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenyleneoxymethylene(1,1,3,3-tetramethyl-1,3-disiloxanediyl)methyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



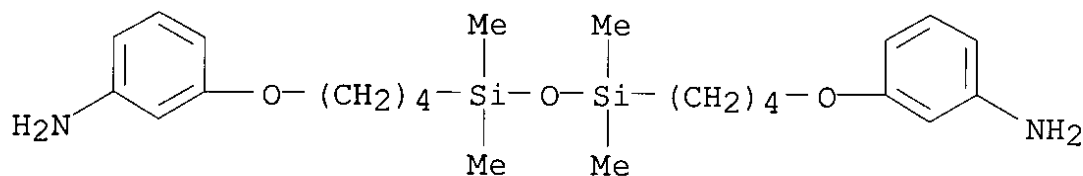
RN 83891-18-3 HCAPLUS

CN 1,3-Isobenzofurandione, 5,5'-[thiobis(4,1-phenyleneoxy)]bis-,  
polymer with 3,3'-[1,4-phenylenebis(oxy)]bis[benzenamine] and  
3,3'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(4,1-  
butanediyl)oxy]]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 72066-90-1

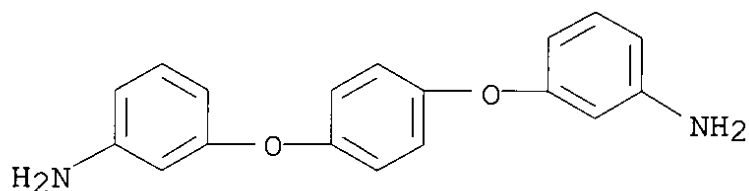
CMF C24 H40 N2 O3 Si2



CM 2

CRN 59326-56-6

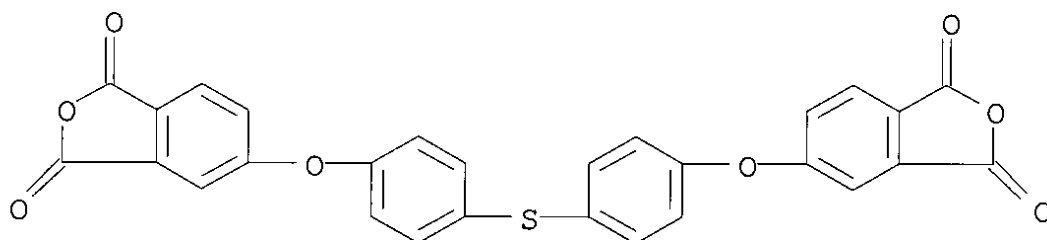
CMF C18 H16 N2 O2



CM 3

CRN 52256-85-6

CMF C28 H14 O8 S



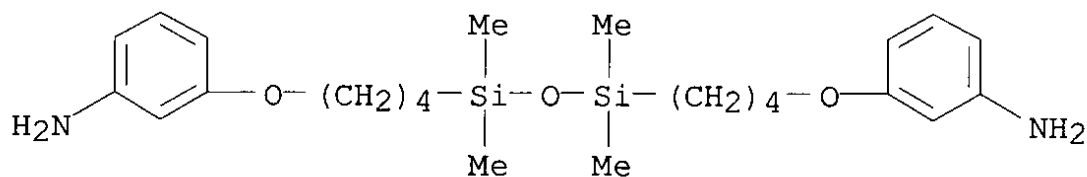
RN 83891-20-7 HCAPLUS

CN 1,3-Isobenzofurandione, 5,5'-[thiobis(4,1-phenyleneoxy)]bis-,  
 polymer with 3,3'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(4,1-  
 butanediyl)oxy]]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 72066-90-1

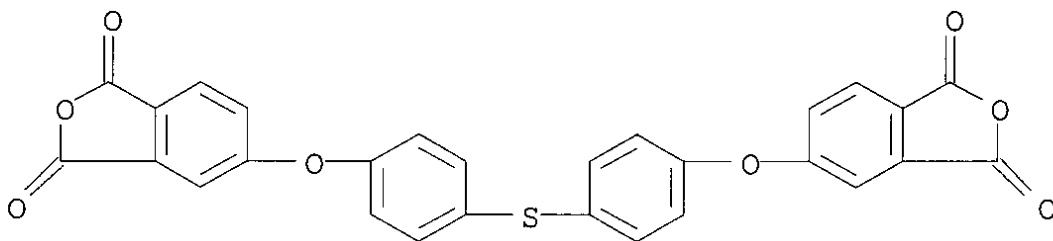
CMF C24 H40 N2 O3 Si2



CM 2

CRN 52256-85-6

CMF C28 H14 O8 S



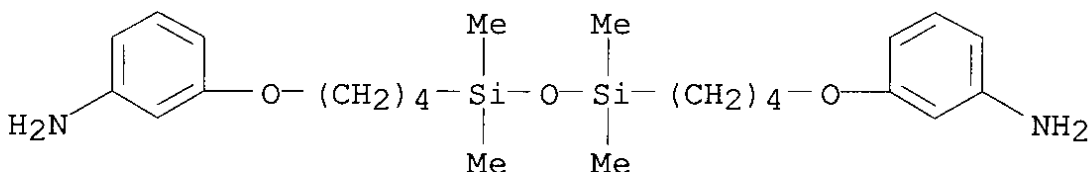
RN 83891-21-8 HCAPLUS

CN 1,3-Isobenzofurandione, 5,5'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bis-, polymer with 2,4-diaminobenzenethiol and 3,3'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(4,1-butanediylloxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 72066-90-1

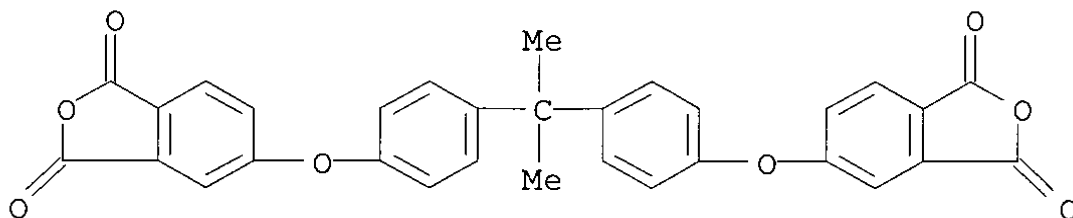
CMF C24 H40 N2 O3 Si2



CM 2

CRN 38103-06-9

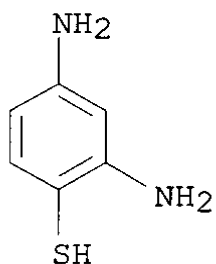
CMF C31 H20 O8



CM 3

CRN 21715-13-9

CMF C6 H8 N2 S



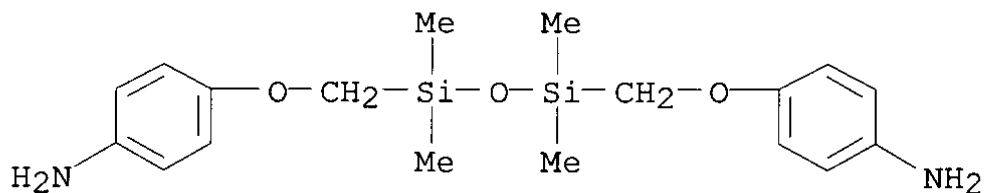
RN 83891-23-0 HCAPLUS

CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with  
 4,4'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(methyleneoxy)]bis[  
 benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 83891-22-9

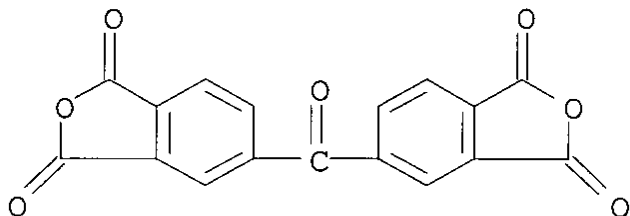
CMF C18 H28 N2 O3 Si2



CM 2



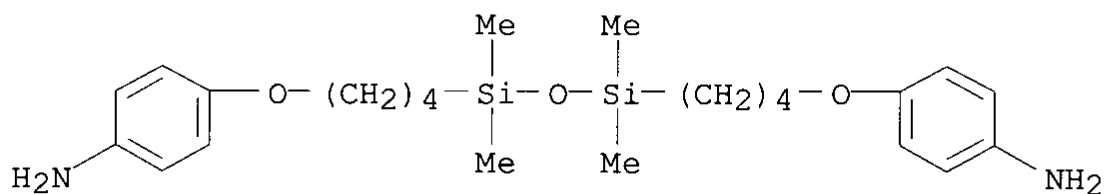
CRN 2421-28-5  
CMF C17 H6 O7



RN 83891-26-3 HCAPLUS  
CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with  
4,4'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(4,1-  
butanediylloxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

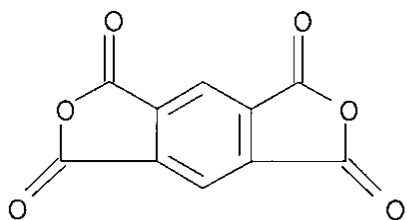
CM 1

CRN 72066-92-3  
CMF C24 H40 N2 O3 Si2



CM 2

CRN 89-32-7  
CMF C10 H2 O6



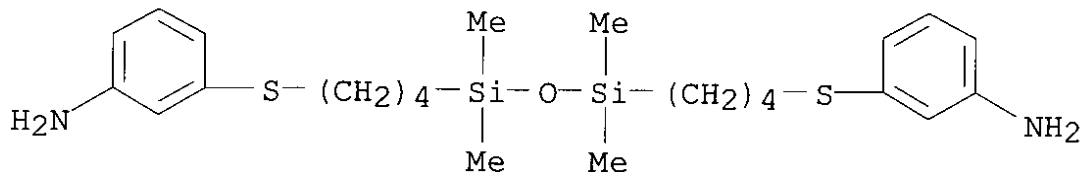
RN 83891-28-5 HCAPLUS  
CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with

3,3'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(4,1-butanediylthio)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 83891-27-4

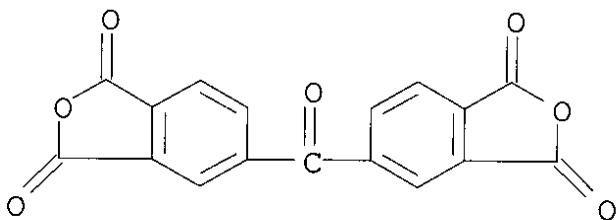
CMF C24 H40 N2 O S2 Si2



CM 2

CRN 2421-28-5

CMF C17 H6 O7



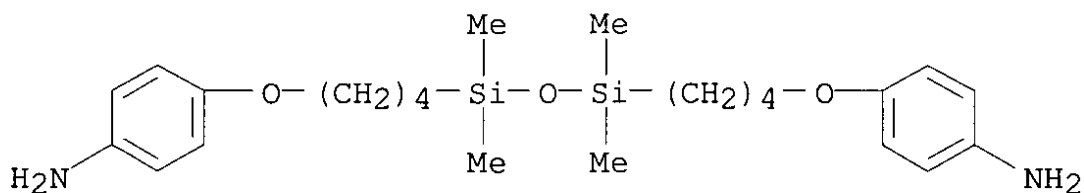
RN 83891-29-6 HCAPLUS

CN 1,3-Isobenzofurandione, 5,5'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bis-, polymer with 1,3-benzenediamine and 4,4'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(4,1-butanediylthio)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 72066-92-3

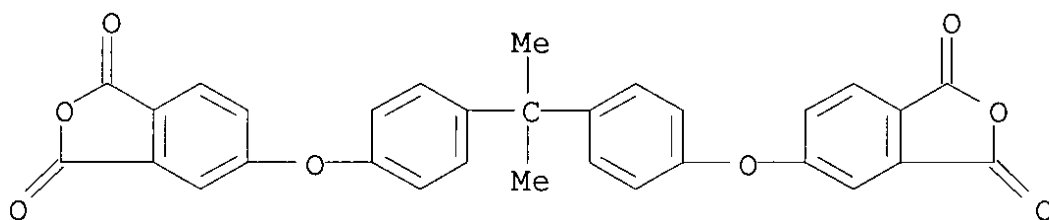
CMF C24 H40 N2 O3 Si2



CM 2

CRN 38103-06-9

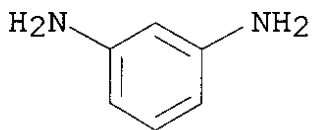
CMF C31 H20 O8



CM 3

CRN 108-45-2

CMF C6 H8 N2



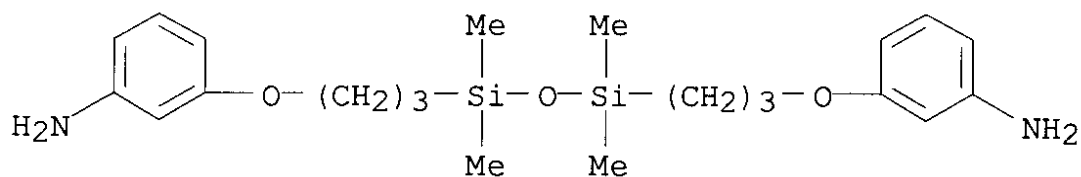
RN 83891-44-5 HCAPLUS

CN 1H,3H-Benzo[1,2-c:4,5-c']difuran-1,3,5,7-tetrone, polymer with  
 4,4'-methylenebis[benzenamine] and 3,3'-[(tetramethyl-1,3-  
 disiloxanediyl)bis(3,1-propanediyl)oxy]bis[benzenamine] (9CI) (CA  
 INDEX NAME)

CM 1

CRN 17678-64-7

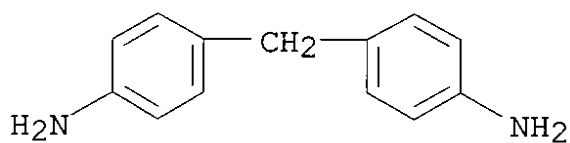
CMF C22 H36 N2 O3 Si2



CM 2

CRN 101-77-9

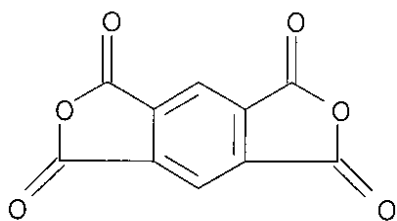
CMF C13 H14 N2



CM 3

CRN 89-32-7

CMF C10 H2 O6



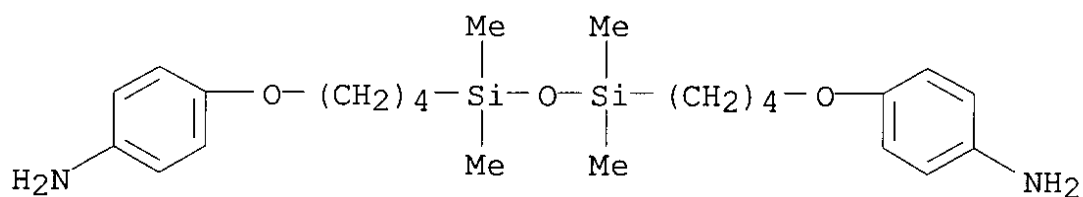
RN 83900-13-4 HCAPLUS

CN 1,3-Isobenzofurandione, 5,5'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bis-, polymer with 4,4'-methylenedibenzeneamine and 4,4'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(4,1-butanediyl)oxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 72066-92-3

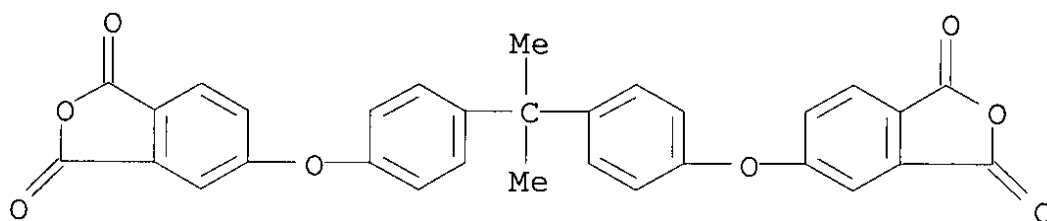
CMF C24 H40 N2 O3 Si2



CM 2

CRN 38103-06-9

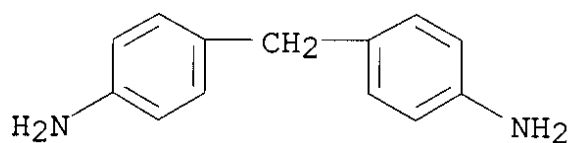
CMF C31 H20 O8



CM 3

CRN 101-77-9

CMF C13 H14 N2



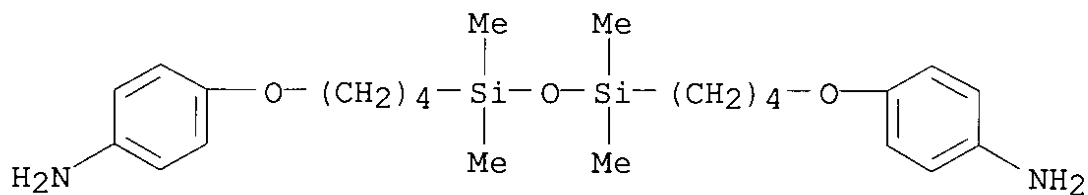
RN 83900-14-5 HCAPLUS

CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with  
 4,4'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(4,1-  
 butanediylloxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 72066-92-3

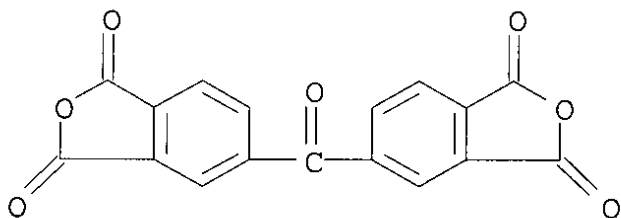
CMF C24 H40 N2 O3 Si2



CM 2

CRN 2421-28-5

CMF C17 H6 O7



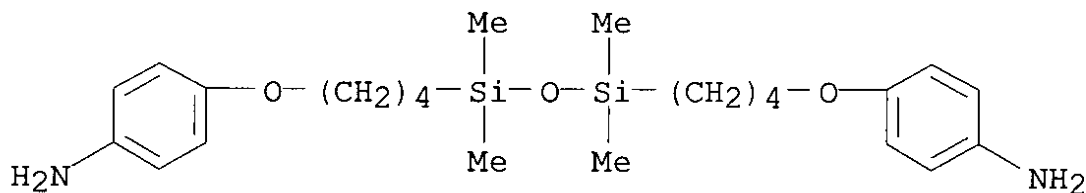
RN 83945-26-0 HCAPLUS

CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with 1(or 3)-(4-aminophenyl)-2,3-dihydro-1,3,3(or 1,1,3)-trimethyl-1H-inden-5-amine and 4,4'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(4,1-butanediylloxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 72066-92-3

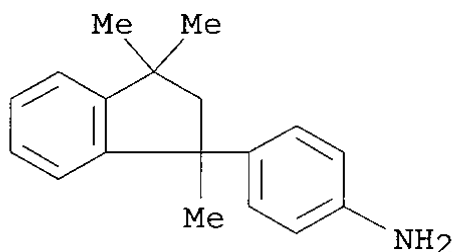
CMF C24 H40 N2 O3 Si2



CM 2

CRN 60451-10-7

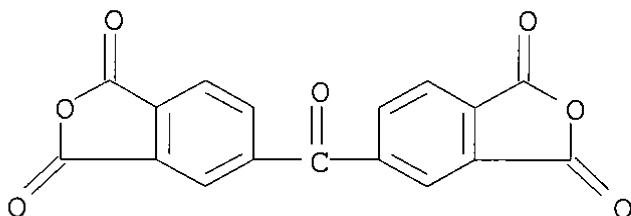
CMF C18 H22 N2  
CCI IDS



D1-NH<sub>2</sub>

CM 3

CRN 2421-28-5  
CMF C17 H6 O7

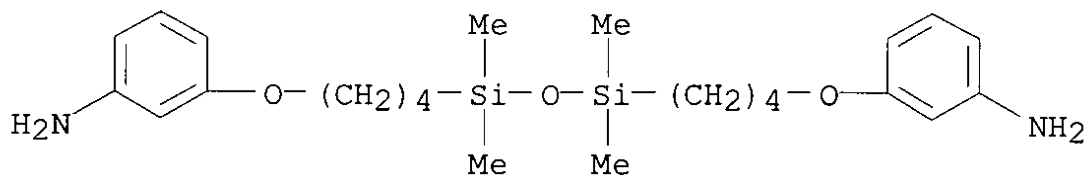


RN 83945-27-1 HCAPLUS

CN 1,3-Isobenzofurandione, 5,5'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bis-, polymer with 1(or 3)-(4-aminophenyl)-2,3-dihydro-1,3,3(or 1,1,3)-trimethyl-1H-inden-5-amine and 3,3'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(4,1-butanediylloxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 72066-90-1  
CMF C24 H40 N2 O3 Si2

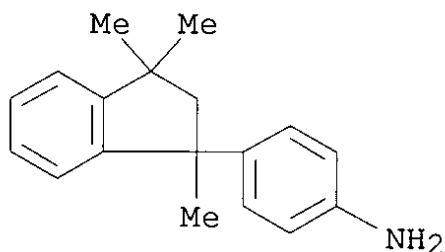


CM 2

CRN 60451-10-7

CMF C18 H22 N2

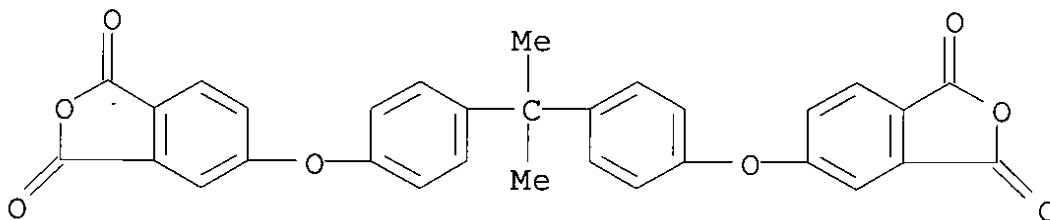
CCI IDS

D1-NH<sub>2</sub>

CM 3

CRN 38103-06-9

CMF C31 H20 O8



RN 83945-28-2 HCAPLUS

CN 1,3-Isobenzofurandione, 4,4'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bis-, polymer with 1(or 3)-(4-aminophenyl)-2,3-dihydro-1,3,3(or 1,1,3)-trimethyl-1H-inden-5-amine and 3,3'-[(1,1,3,3-

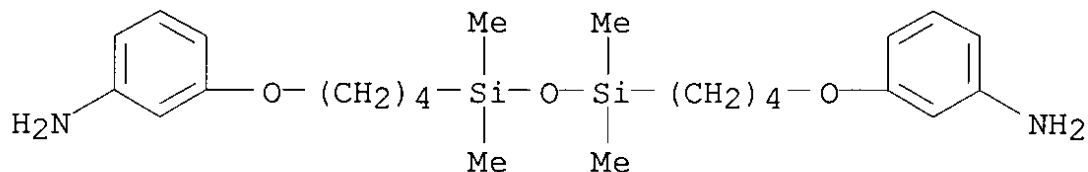


tetramethyl-1,3-disiloxanediyl)bis(4,1-butanediyl)bis[benzenamin  
e] (9CI) (CA INDEX NAME)

CM 1

CRN 72066-90-1

CMF C24 H40 N2 O3 Si2

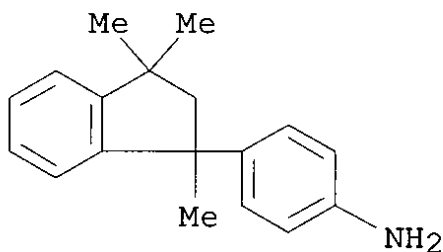


CM 2

CRN 60451-10-7

CMF C18 H22 N2

CCI IDS

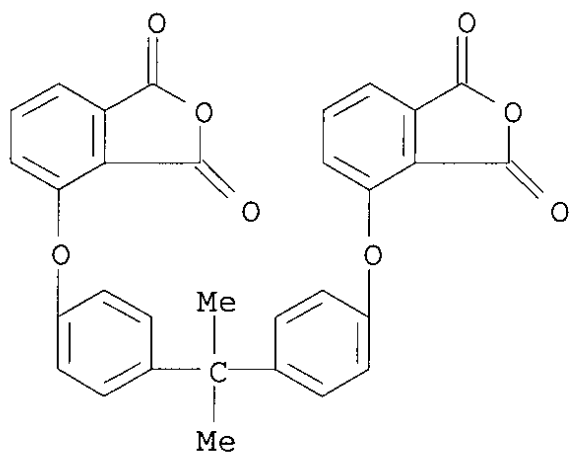


D1-NH<sub>2</sub>

CM 3

CRN 52256-80-1

CMF C31 H20 O8



RN 83945-29-3 HCAPLUS

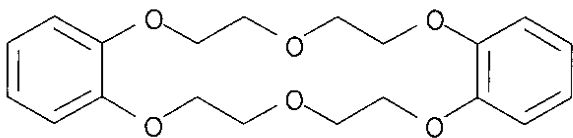
CN 1,3-Isobenzofurandione, 5,5'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bis-, polymer with 6,7,9,10,17,18,20,21-octahydrodibenzo[b,k][1,4,7,10,13,16]hexaoxacyclooctadecin-ar,ar-diamine and 3,3'-[(tetramethyl-1,3-disiloxanediyl)bis(3,1-propanediyl)oxy]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 60016-77-5

CMF C20 H26 N2 O6

CCI IDS

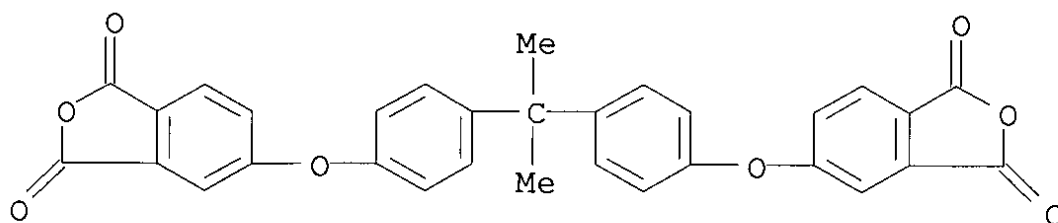


2 [ D1-NH<sub>2</sub> ]

CM 2

CRN 38103-06-9

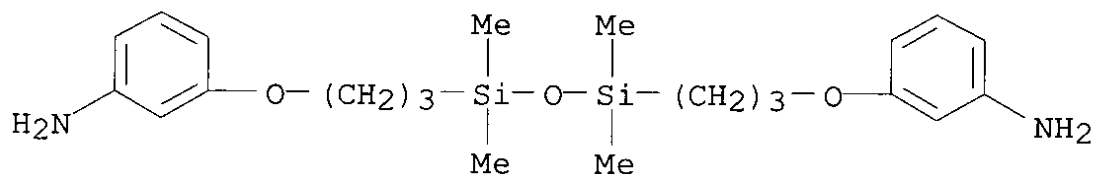
CMF C31 H20 O8



CM 3

CRN 17678-64-7

CMF C22 H36 N2 O3 Si2



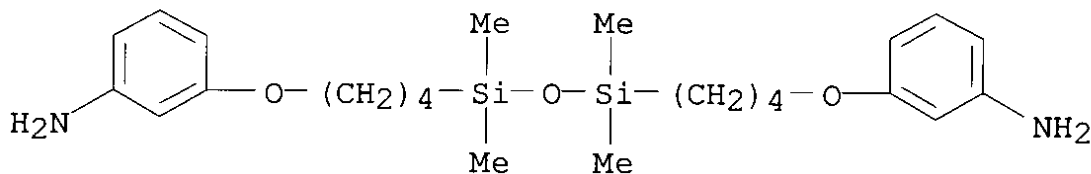
RN 83946-33-2 HCAPLUS

CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with 1(or 3)-(4-aminophenyl)-2,3-dihydro-1,3,3(or 1,1,3)-trimethyl-1H-inden-5-amine and 3,3'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(4,1-butanediylloxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 72066-90-1

CMF C24 H40 N2 O3 Si2

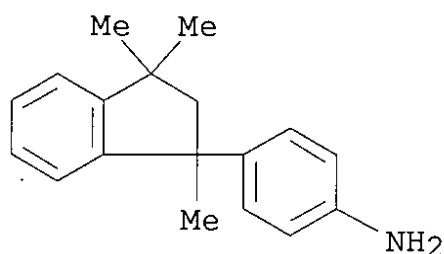


CM 2

CRN 60451-10-7

CMF C18 H22 N2

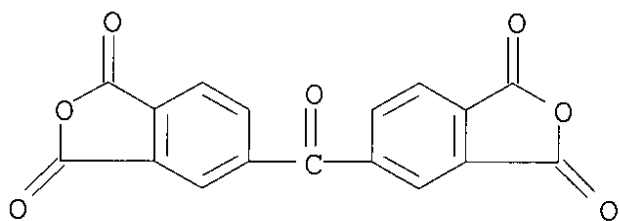
CCI IDS

D1-NH<sub>2</sub>

CM 3

CRN 2421-28-5

CMF C17 H6 O7



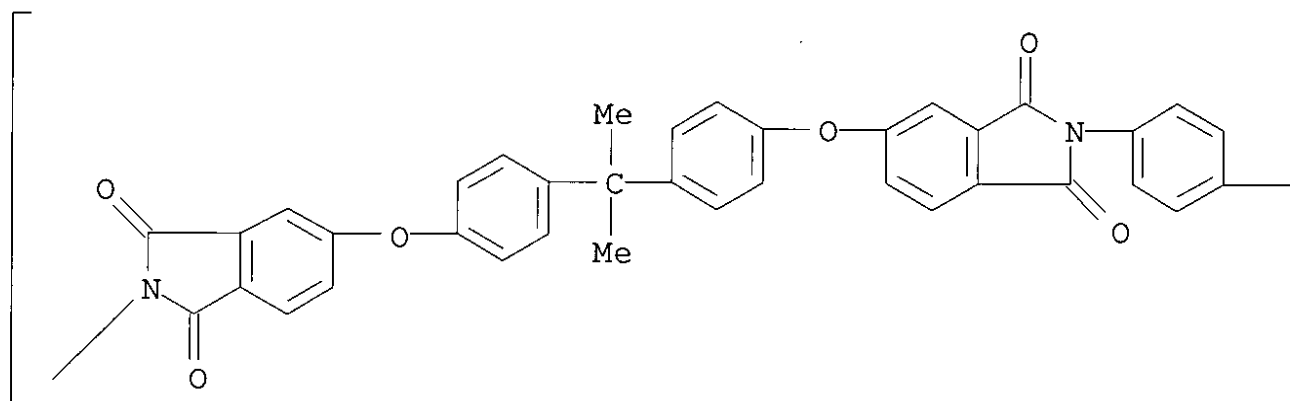
IT 83874-98-0 83891-45-6

(coatings, on ceramic plates)

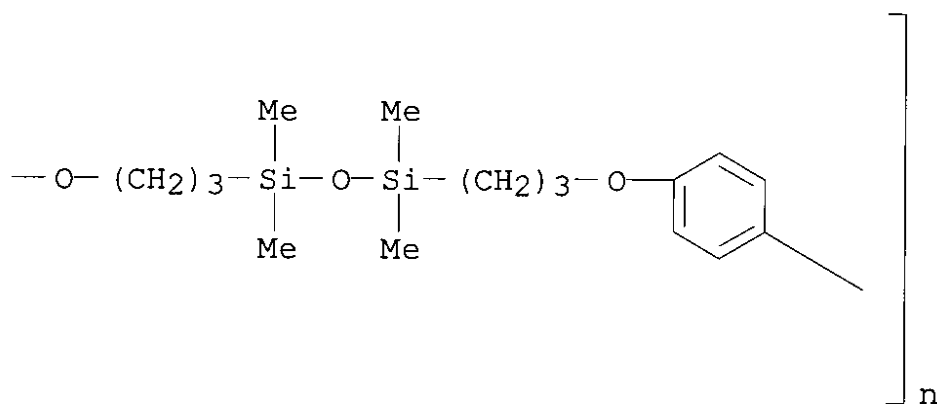
RN 83874-98-0 HCAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)oxy-1,4-phenylene(1-methylethylidene)-1,4-phenyleneoxy(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenyleneoxy-1,3-propanediyl(1,1,3,3-tetramethyl-1,3-disiloxanediyl)-1,3-propanediyl-1,4-phenyleneoxy-1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



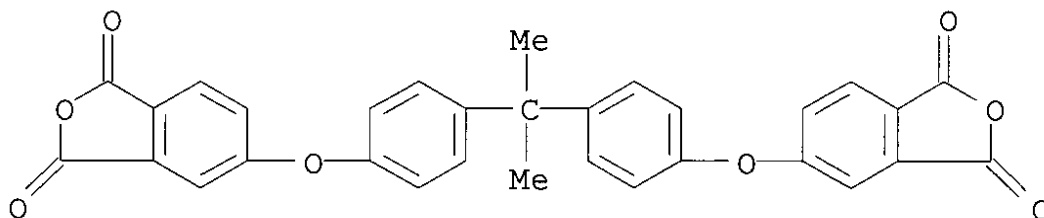
RN 83891-45-6 HCAPLUS

CN 1,3-Isobenzofurandione, 5,5'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bis-, polymer with 4,4'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(3,1-propanediyl)oxy]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 38103-06-9

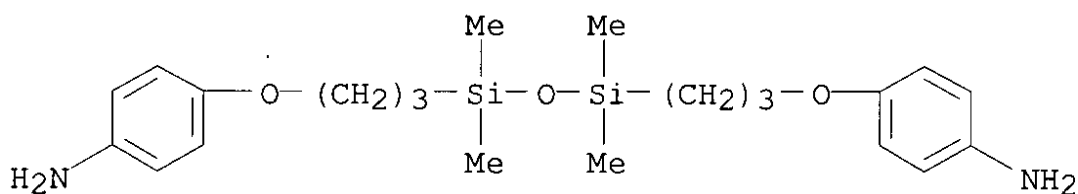
CMF C31 H20 O8



CM 2

CRN 17678-63-6

CMF C22 H36 N2 O3 Si2



IT 72403-27-1 83874-89-9

(crosslinking of, by aminophenylacetylene)

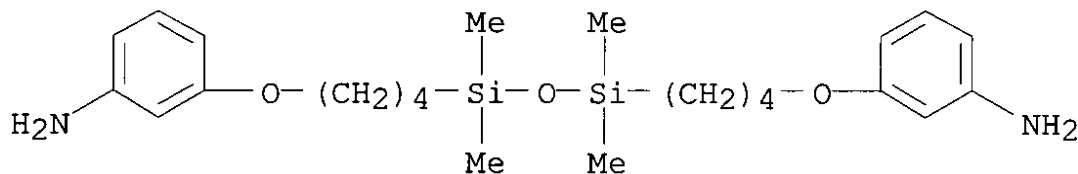
RN 72403-27-1 HCAPLUS

CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with  
 3,3'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(4,1-  
 butanediylloxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 72066-90-1

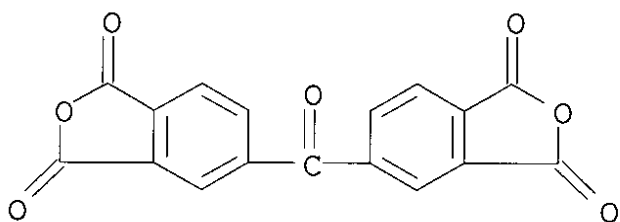
CMF C24 H40 N2 O3 Si2



CM 2

CRN 2421-28-5

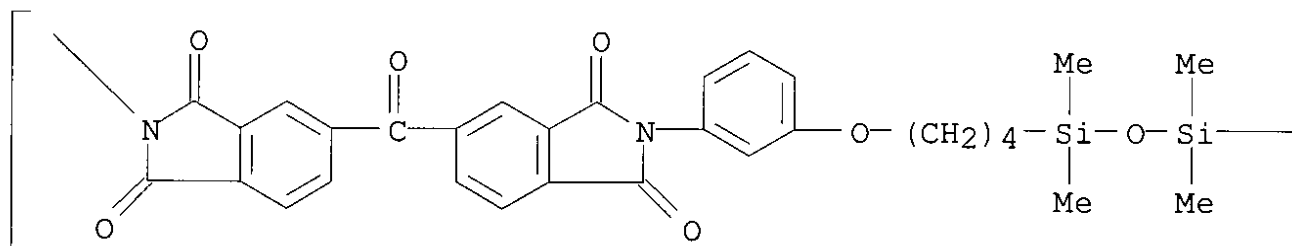
CMF C17 H6 O7



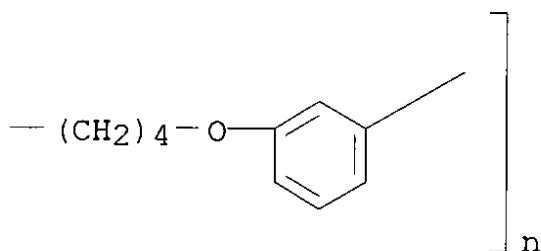
RN 83874-89-9 HCAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,3-phenyleneoxy-1,4-butanediyl(1,1,3,3-tetramethyl-1,3-disiloxanediyl)-1,4-butanediyl-1,3-phenylene] (9CI) (CA INDEX NAME)

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PAGE 1-B



IT 70159-84-1

(elec. insulators, for wire)

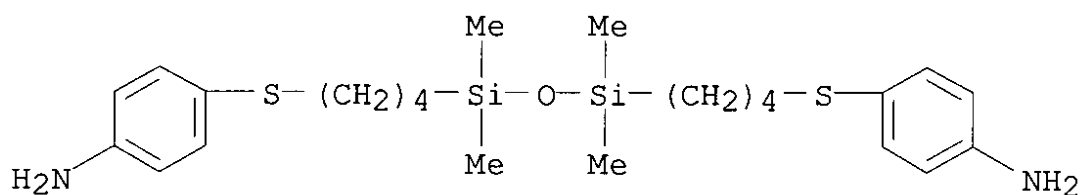
RN 70159-84-1 HCAPLUS

CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with 1,3-benzenediamine and 4,4'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(4,1-butanediylthio)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 70159-83-0

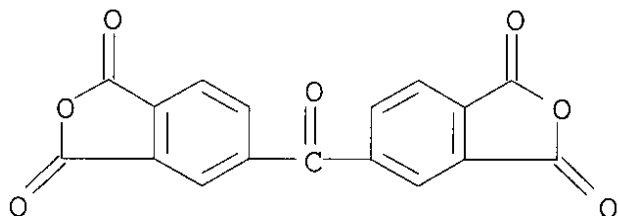
CMF C24 H40 N2 O S2 Si2



CM 2

CRN 2421-28-5

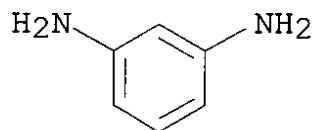
CMF C17 H6 O7



CM 3

CRN 108-45-2

CMF C6 H8 N2



IT 83874-54-8P 83874-56-0P 83874-57-1P  
83874-59-3P 83874-60-6P 83874-64-0P  
83874-65-1P 83874-66-2P 83874-68-4P  
83874-70-8P 83874-72-0P 83874-73-1P  
83874-90-2P 83874-91-3P 83874-92-4P



83874-96-8P 83891-25-2P 83891-35-4P  
83891-37-6P 83891-40-1P 83891-42-3P  
83891-43-4P 83891-82-1P 83919-34-0P  
83921-98-6P

(prepn. of)

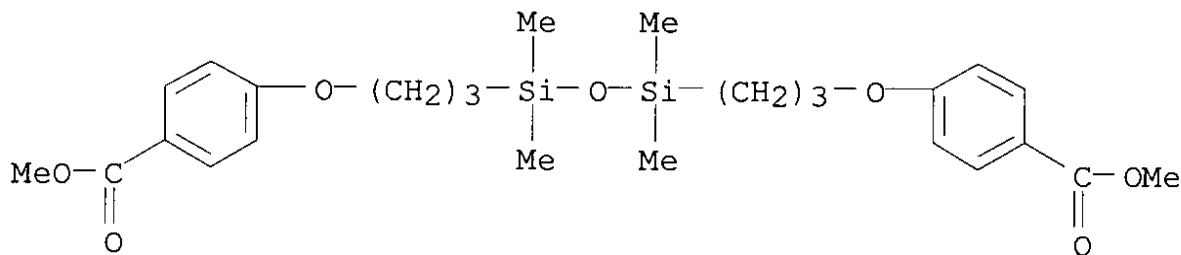
RN 83874-54-8 HCAPLUS

CN 1,4-Benzenedicarboxylic acid, dimethyl ester, polymer with dimethyl  
4,4'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(3,1-  
propanediylloxy)]bis[benzoate] and 1,2-ethanediol (9CI) (CA INDEX  
NAME)

CM 1

CRN 83874-53-7

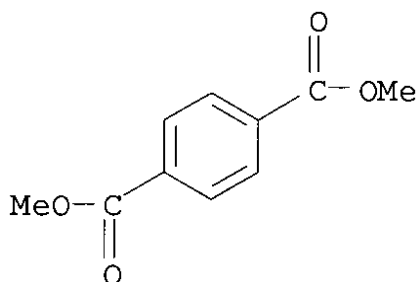
CMF C26 H38 O7 Si2



CM 2

CRN 120-61-6

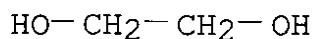
CMF C10 H10 O4



CM 3

CRN 107-21-1

CMF C2 H6 O2



RN 83874-56-0 HCAPLUS

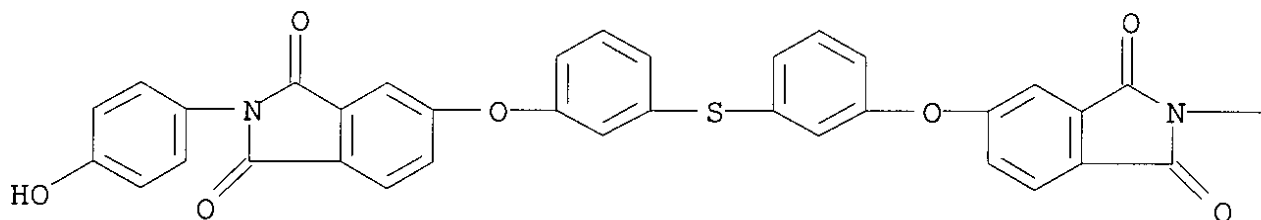
CN 1,3-Benzenedicarbonyl dichloride, polymer with 1,4-benzenedicarbonyl dichloride, 4,4'-(1-methylethylidene)bis[phenol] and 2,2'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(4,1-butanediyl)oxy-3,1-phenylene]bis[5-[3-[[3-[[2,3-dihydro-2-(4-hydroxyphenyl)-1,3-dioxo-1H-isoindol-5-yl]oxy]phenyl]thio]phenoxy]-1H-isoindole-1,3(2H)-dione] (9CI) (CA INDEX NAME)

CM 1

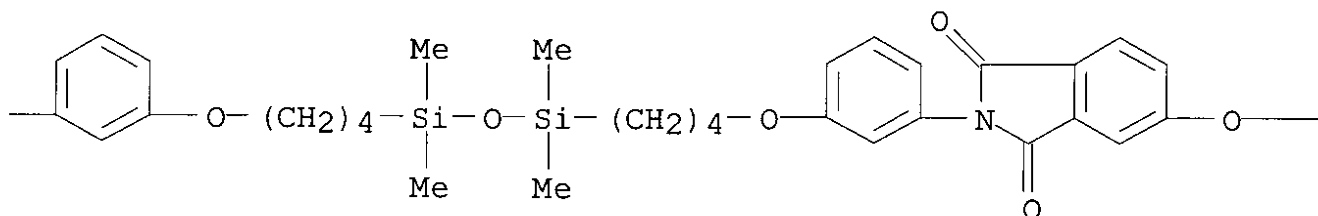
CRN 83874-55-9

CMF C92 H74 N4 O17 S2 Si2

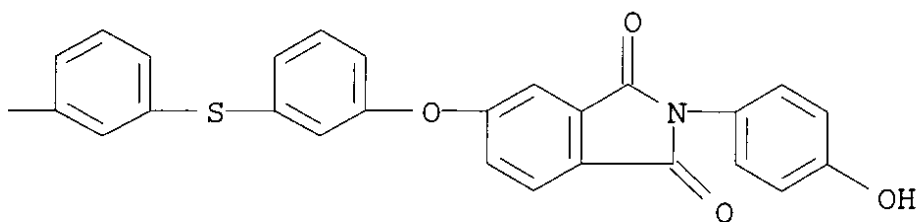
PAGE 1-A



PAGE 1-B



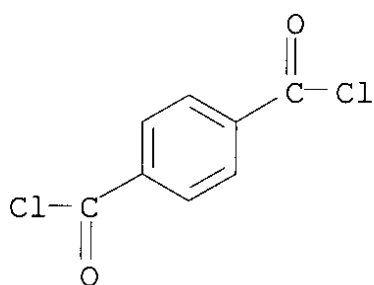
PAGE 1-C



CM 2

CRN 100-20-9

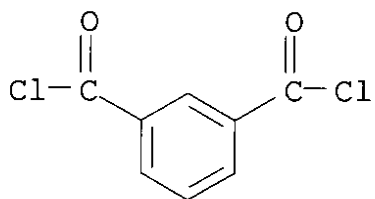
CMF C8 H4 Cl2 O2



CM 3

CRN 99-63-8

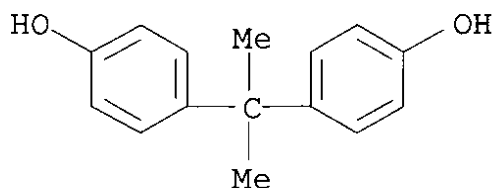
CMF C8 H4 Cl2 O2



CM 4

CRN 80-05-7

CMF C15 H16 O2



RN 83874-57-1 HCAPLUS

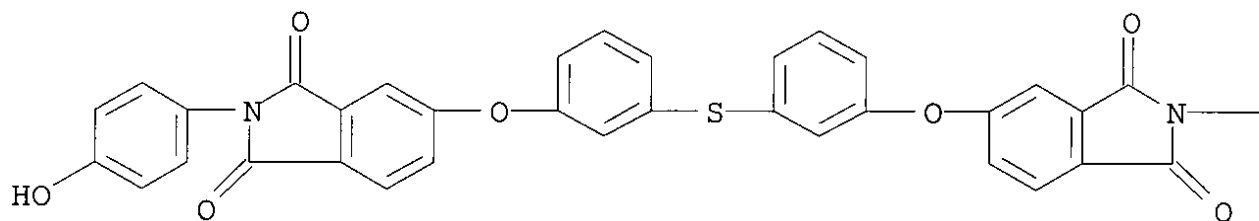
CN Carbonic dichloride, polymer with 4,4'-(1-methylethylidene)bis[phenol] and 2,2'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(4,1-butanediyl)oxy-3,1-phenylene]bis[5-[3-[[3-[[2,3-dihydro-2-(4-hydroxyphenyl)-1,3-dioxo-1H-isoindol-5-yl]oxy]phenyl]thio]phenoxy]-1H-isoindole-1,3(2H)-dione] (9CI) (CA INDEX NAME)

CM 1

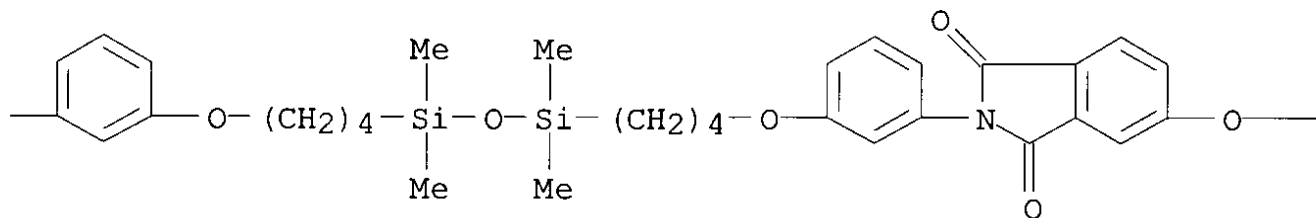
CRN 83874-55-9

CMF C92 H74 N4 O17 S2 Si2

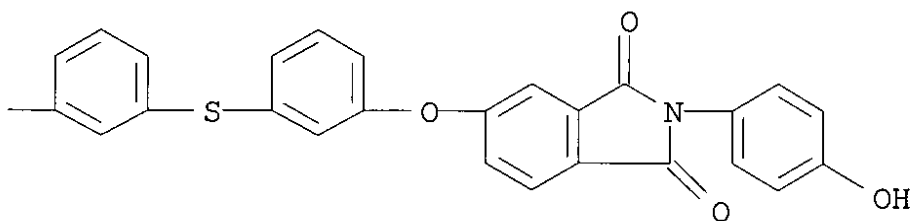
PAGE 1-A



PAGE 1-B



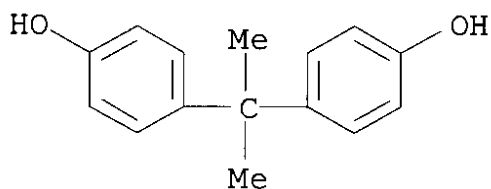
PAGE 1-C



CM 2

CRN 80-05-7

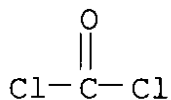
CMF C15 H16 O2



CM 3

CRN 75-44-5

CMF C C12 O



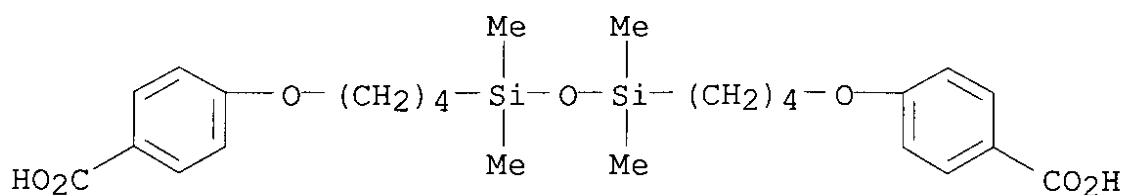
RN 83874-59-3 HCAPLUS

CN Hexanedioic acid, polymer with 1,6-hexanediamine and  
 4,4'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(4,1-  
 butanediylloxy)]bis[benzoic acid] (9CI) (CA INDEX NAME)

CM 1

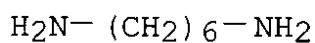
CRN 83874-58-2

CMF C26 H38 O7 Si2



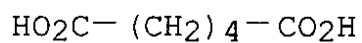
CM 2

CRN 124-09-4  
CMF C6 H16 N2



CM 3

CRN 124-04-9  
CMF C6 H10 O4

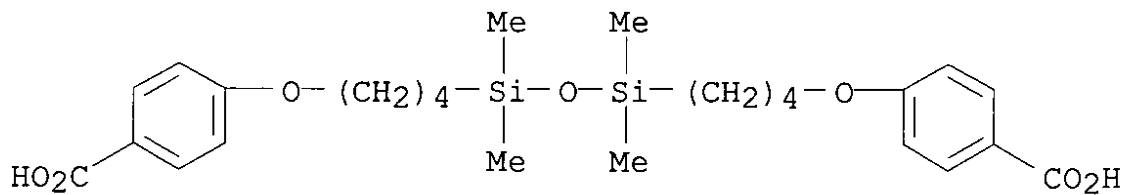


RN 83874-60-6 HCAPLUS

CN 1,4-Benzenedicarbonyl dichloride, polymer with 1,4-benzenediamine and 4,4'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(4,1-butanediylloxy)]bis[benzoic acid] (9CI) (CA INDEX NAME)

CM 1

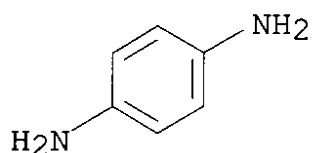
CRN 83874-58-2  
CMF C26 H38 O7 Si2



CM 2

CRN 106-50-3

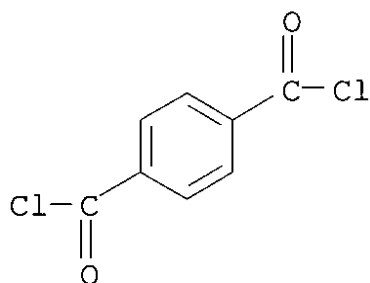
CMF C6 H8 N2



CM 3

CRN 100-20-9

CMF C8 H4 Cl2 O2



RN 83874-64-0 HCAPLUS

CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with  
3,3'-[(1,1,3,3,5,5,7,7,9,9,11,11,13,13,15,15-hexadecamethyl-1,15-  
octasiloxanediyl)bis(4,1-butanediyl)oxy]bis[benzenamine] and  
3,3'-[1,3-phenylenebis(oxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 84081-56-1

CMF C36 H76 N2 O9 Si8





RN 83874-65-1 HCAPLUS

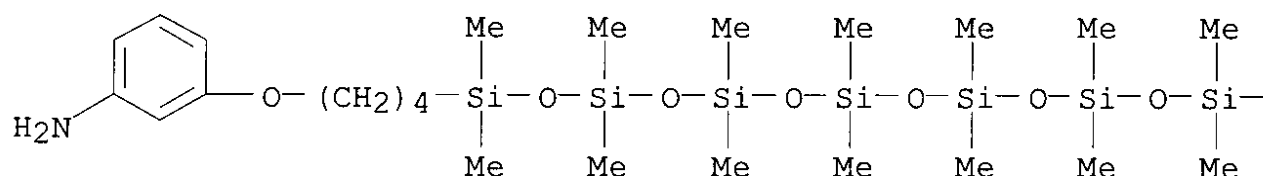
CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, telomer with  
 4,4'-[(1-methylethylidene)bis(4,1-phenyleneoxy)]bis[benzenamine] and  
 3,3'-[(1,1,3,3,5,5,7,7,9,9,11,11,13,13-tetradecamethyl-1,15-  
 octasiloxanediyl)bis(4,1-butanediyl)oxy]bis[benzenamine] (9CI) (CA  
 INDEX NAME)

CM 1

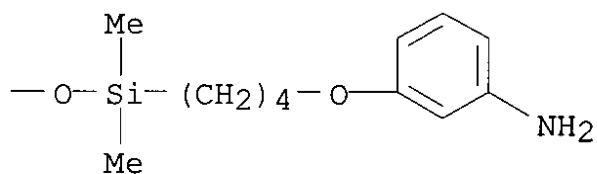
CRN 84081-56-1

CMF C36 H76 N2 O9 Si8

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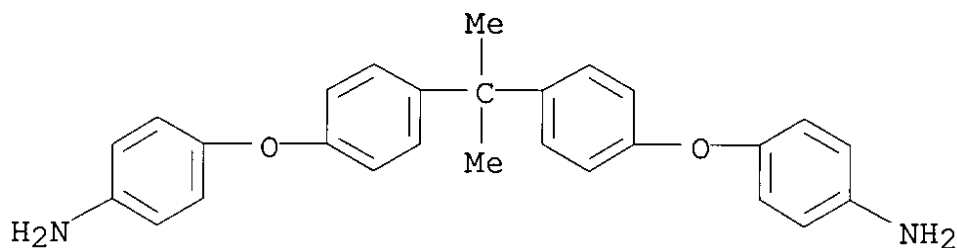
PAGE 1-B



CM 2

CRN 13080-86-9

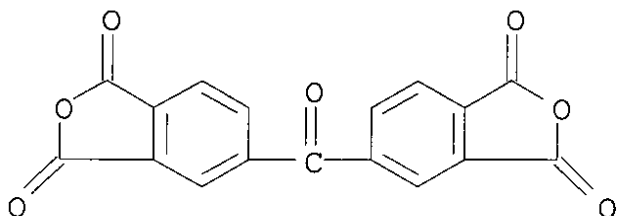
CMF C27 H26 N2 O2



CM 3

CRN 2421-28-5

CMF C17 H6 O7



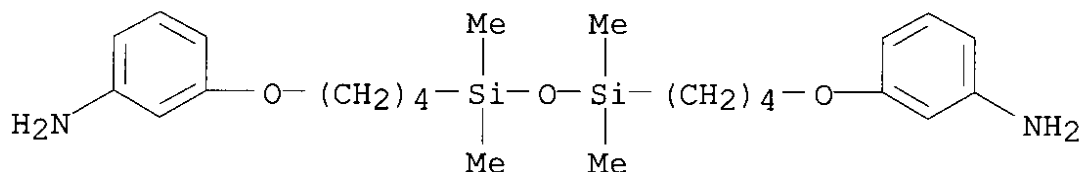
RN 83874-66-2 HCAPLUS

CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with  
 3,3'-[1,3-phenylenebis(oxy)]bis[benzenamine] and  
 3,3'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(4,1-  
 butanediyl oxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 72066-90-1

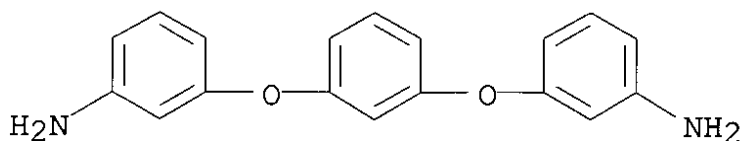
CMF C24 H40 N2 O3 Si2



CM 2

CRN 10526-07-5

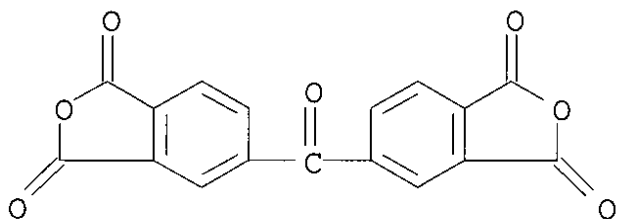
CMF C18 H16 N2 O2



CM 3

CRN 2421-28-5

CMF C17 H6 O7



RN 83874-68-4 HCAPLUS

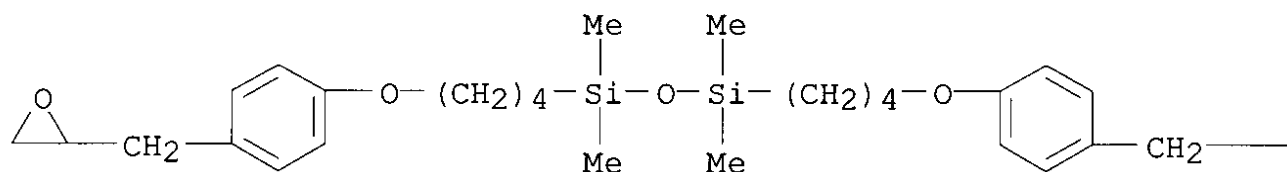
CN 1,3-Isobenzofurandione, polymer with 1,1,3,3-tetramethyl-1,3-bis[4-(4-(oxiranymethyl)phenoxy)butyl]disiloxane (9CI) (CA INDEX NAME)

CM 1

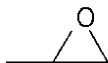
CRN 83874-67-3

CMF C30 H46 O5 Si2

PAGE 1-A



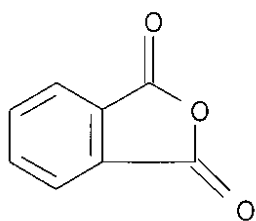
PAGE 1-B



CM 2

CRN 85-44-9

CMF C8 H4 O3



RN 83874-70-8 HCAPLUS

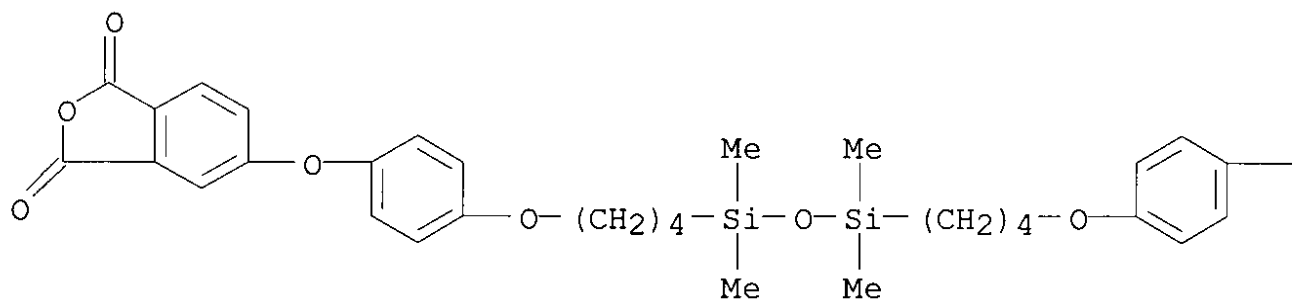
CN 1,3-Isobenzofurandione, 5,5'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(4,1-butanediyl)oxy-4,1-phenyleneoxy]bis-, polymer with 4,4'-methylenebis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

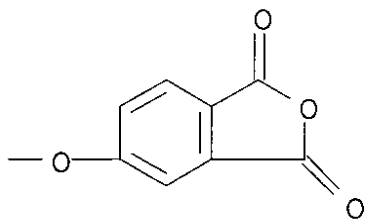
CRN 83874-69-5

CMF C40 H42 O11 Si2

PAGE 1-A



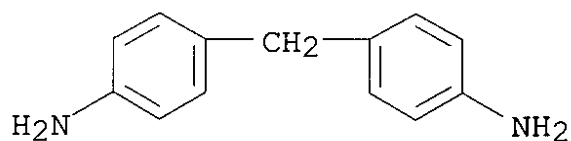
PAGE 1-B



CM 2

CRN 101-77-9

CMF C13 H14 N2



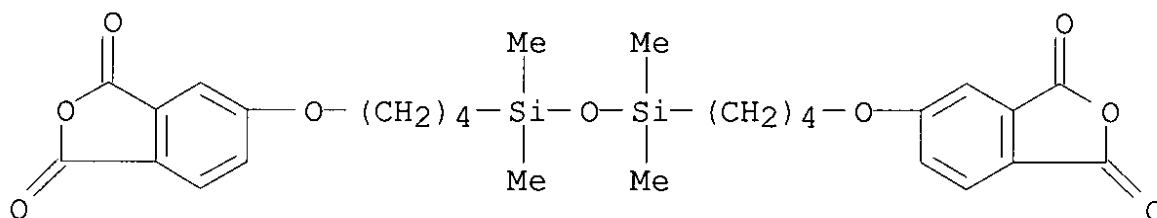
RN 83874-72-0 HCAPLUS

CN	1,3-Isobenzofurandione, 5,5'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(4,1-butanediylloxy)]bis-, polymer with 3,3'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(4,1-butanediylloxy)]bis[benzenamine] (9CI) (CA INDEX NAME)
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CM 1

CRN 83874-71-9

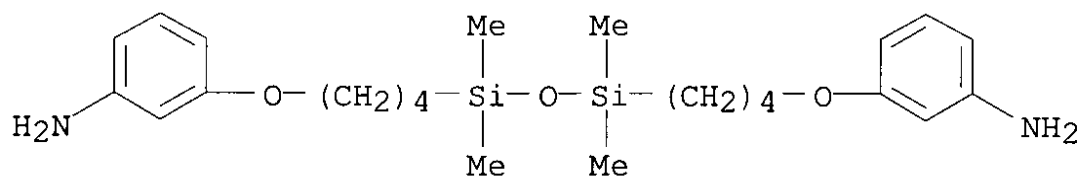
CMF C28 H34 O9 Si2



CM 2

CRN 72066-90-1

CMF C24 H40 N2 O3 Si2

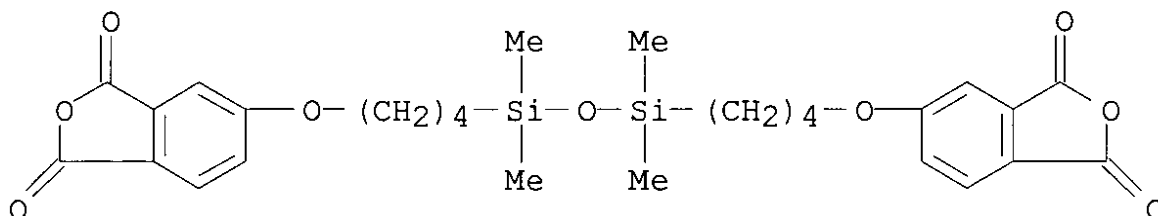


RN 83874-73-1 HCAPLUS

CN 1,3-Isobenzofurandione, 5,5'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(4,1-butanediylloxy)]bis-, polymer with 1,3-benzenediamine (9CI) (CA INDEX NAME)

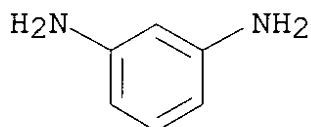
CM 1

CRN 83874-71-9  
CMF C28 H34 O9 Si2



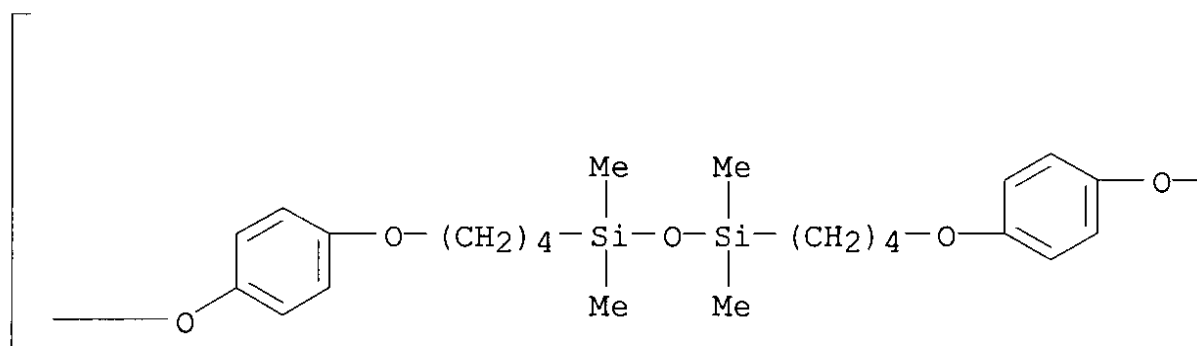
CM 2

CRN 108-45-2  
CMF C6 H8 N2

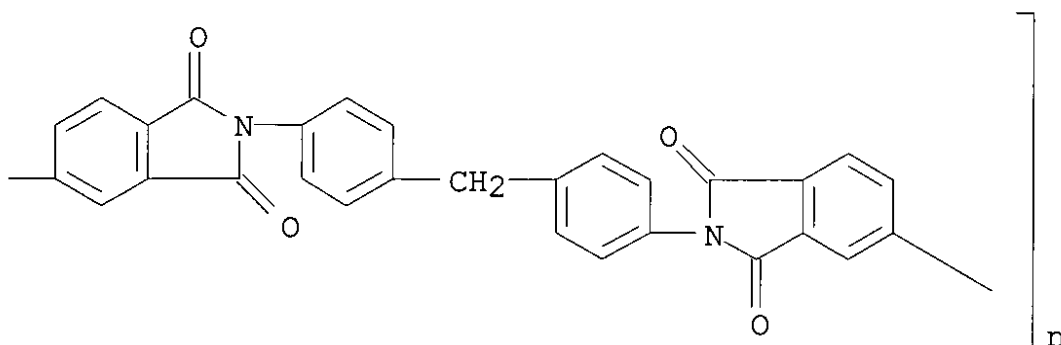


RN 83874-90-2 HCAPLUS  
CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenylenemethylene-1,4-phenylene(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)oxy-1,4-phenyleneoxy-1,4-butanediyl(1,1,3,3-tetramethyl-1,3-disiloxanediyl)-1,4-butanediyl]oxy-1,4-phenyleneoxy] (9CI) (CA INDEX NAME)

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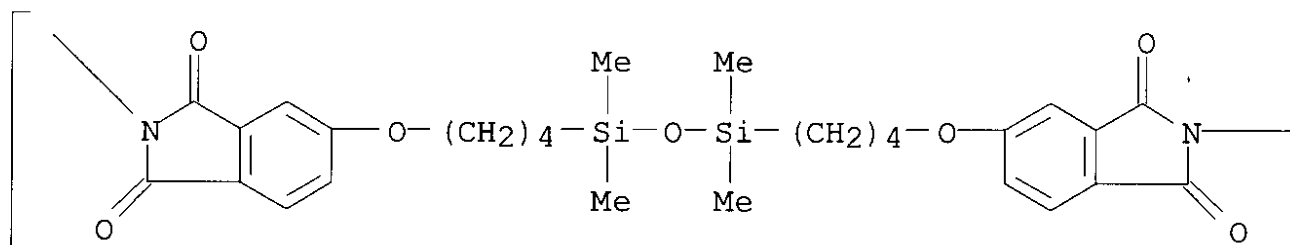
PAGE 1-B



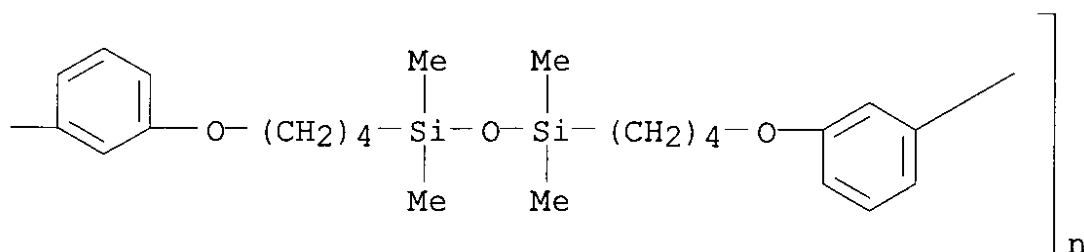
RN 83874-91-3 HCAPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)oxy-1,4-butanediyl(1,1,3,3-tetramethyl-1,3-disiloxanediyl)-1,4-butanediyl]oxy(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,3-phenyleneoxy-1,4-butanediyl(1,1,3,3-tetramethyl-1,3-disiloxanediyl)-1,4-butanediyl] (9CI) (CA INDEX NAME)

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PAGE 1-B

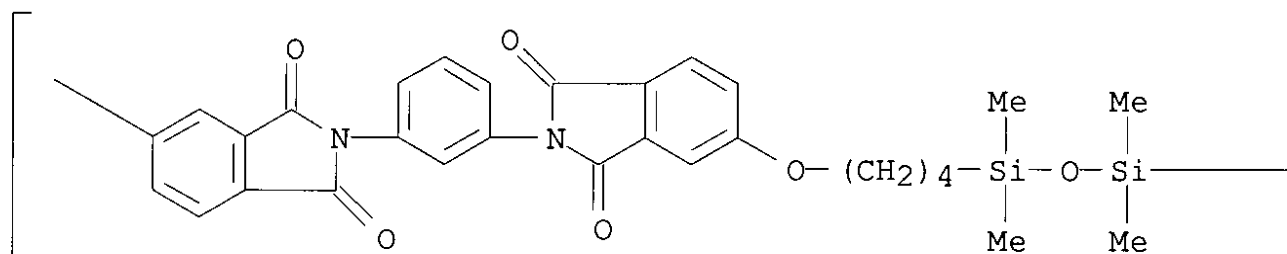


RN 83874-92-4 HCAPLUS

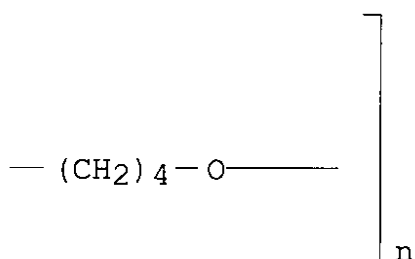
CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,3-phenylene(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)oxy-1,4-butanediyl(1,1,3,3-

tetramethyl-1,3-disiloxanediyl)-1,4-butanediyoxy] (9CI) (CA INDEX NAME)

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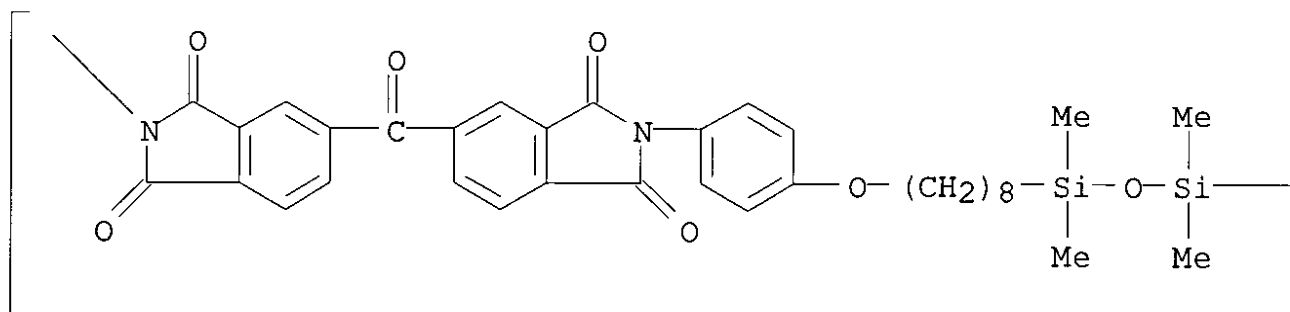
PAGE 1-B



RN 83874-96-8 HCAPLUS

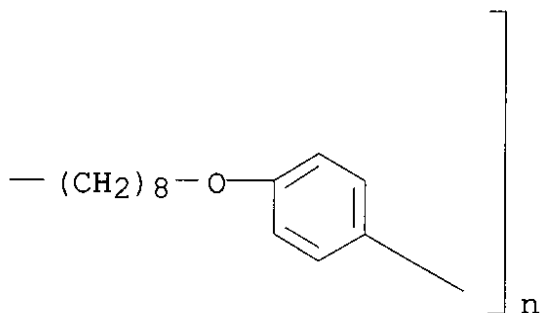
CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)carbonyl(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenyleneoxy-1,8-octanediyl(1,1,3,3-tetramethyl-1,3-disiloxanediyl)-1,8-octanediyoxy-1,4-phenylene] (9CI) (CA INDEX NAME)

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PAGE 1-B



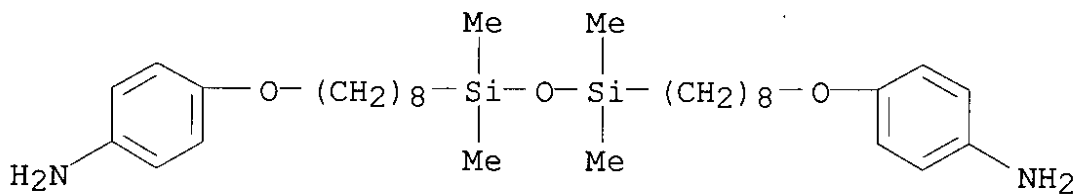
RN 83891-25-2 HCAPLUS

CN 1,3-Isobenzofurandione, 5,5'-carbonylbis-, polymer with  
 4,4'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(8,1-octanediylloxy)]bis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 83891-24-1

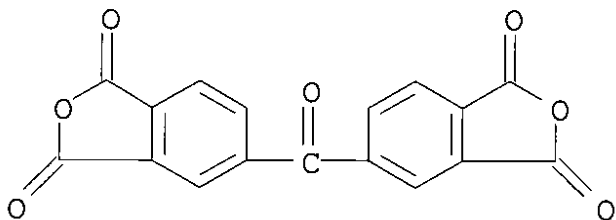
CMF C32 H56 N2 O3 Si2



CM 2

CRN 2421-28-5

CMF C17 H6 O7



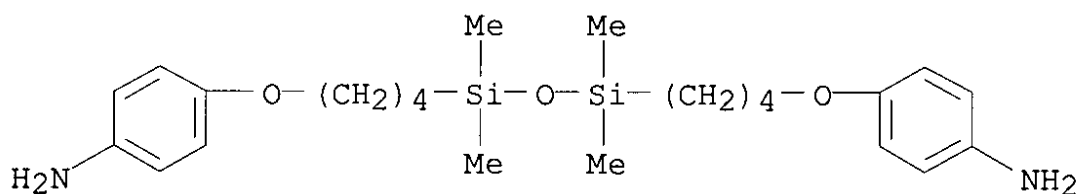
RN 83891-35-4 HCAPLUS

CN Benzenamine, 4,4'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(4,1-butanediylloxy)]bis-, telomer with 2,4,6,8-tetramethyl-2,4,6,8-tetraphenylcyclotetrasiloxane (9CI) (CA INDEX NAME)

CM 1

CRN 72066-92-3

CMF C24 H40 N2 O3 Si2



CM 2

CRN 25569-22-6

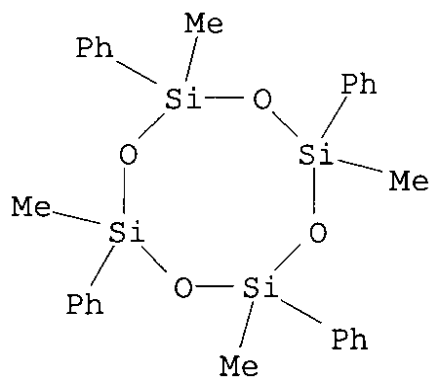
CMF (C28 H32 O4 Si4)x

CCI PMS

CM 3

CRN 77-63-4

CMF C28 H32 O4 Si4



RN 83891-37-6 HCAPLUS

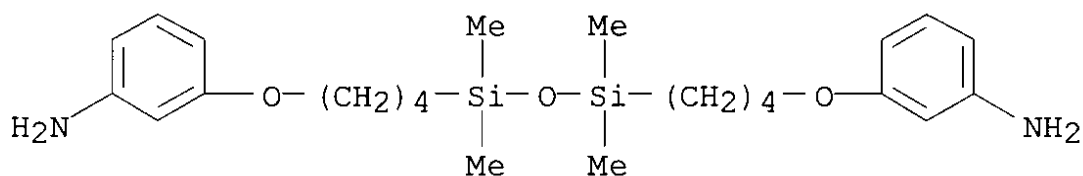
CN Benzenamine, 3,3'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(4,1-butanediylloxy)]bis-, telomer with octamethylcyclotetrasiloxane and 2,4,6,8-tetramethyl-2,4,6,8-tetraphenylcyclotetrasiloxane (9CI) (CA

INDEX NAME)

CM 1

CRN 72066-90-1

CMF C24 H40 N2 O3 Si2



CM 2

CRN 68072-44-6

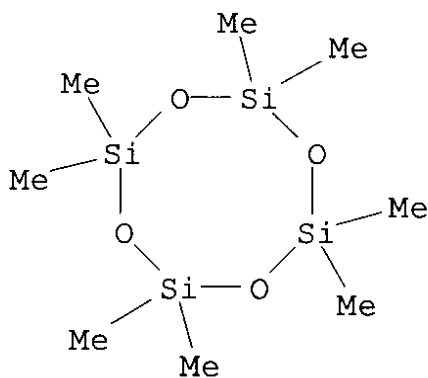
CMF (C28 H32 O4 Si4 . C8 H24 O4 Si4)x

CCI PMS

CM 3

CRN 556-67-2

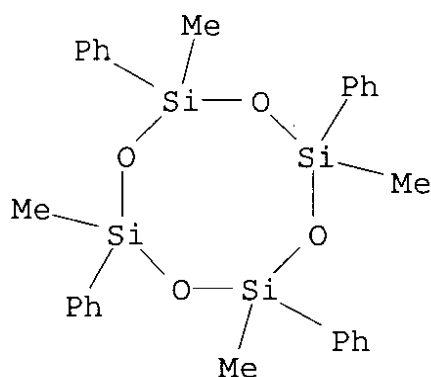
CMF C8 H24 O4 Si4



CM 4

CRN 77-63-4

CMF C28 H32 O4 Si4



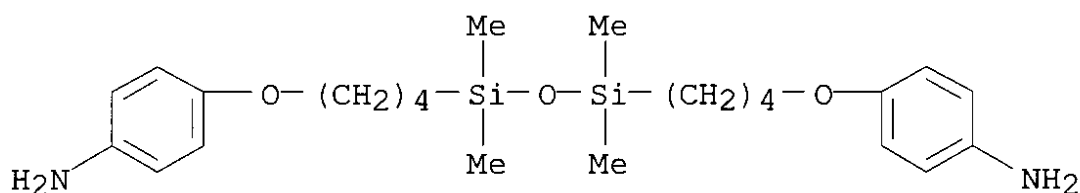
RN 83891-40-1 HCAPLUS

CN Benzenamine, 4,4'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(4,1-butanediyoxy)]bis-, telomer with octamethylcyclotetrasiloxane and 2,4,6,8-tetraethenyl-2,4,6,8-tetramethylcyclotetrasiloxane (9CI)  
(CA INDEX NAME)

CM 1

CRN 72066-92-3

CMF C24 H40 N2 O3 Si2



CM 2

CRN 26659-55-2

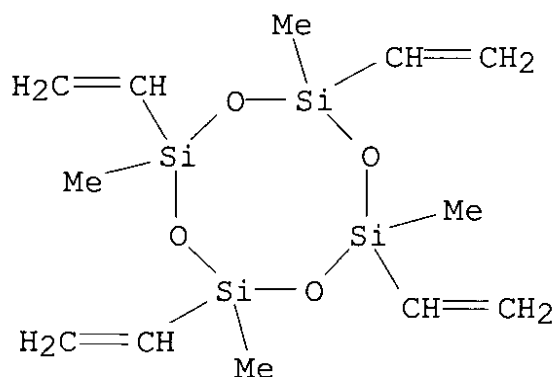
CMF (C12 H24 O4 Si4 . C8 H24 O4 Si4)x

CCI PMS

CM 3

CRN 2554-06-5

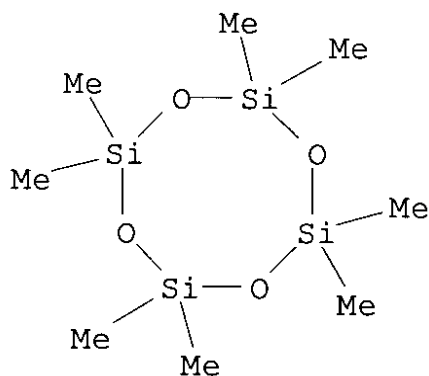
CMF C12 H24 O4 Si4



CM 4

CRN 556-67-2

CMF C8 H24 O4 Si4



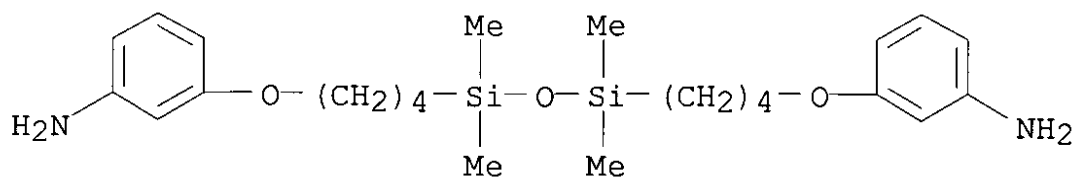
RN 83891-42-3 HCAPLUS

CN Benzenamine, 3,3'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(4,1-butanediyoxy)]bis-, telomer with 2,4,6,8-tetraethenyl-2,4,6,8-tetramethylcyclotetrasiloxane and 2,4,6,8-tetramethyl-2,4,6,8-tetraphenylcyclotetrasiloxane (9CI) (CA INDEX NAME)

CM 1

CRN 72066-90-1

CMF C24 H40 N2 O3 Si2



CM 2

CRN 83891-41-2

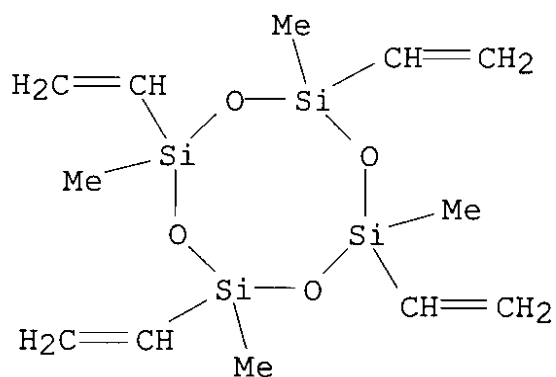
CMF (C28 H32 O4 Si4 . C12 H24 O4 Si4)x

CCI PMS

CM 3

CRN 2554-06-5

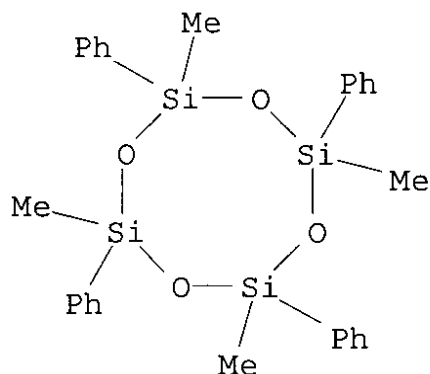
CMF C12 H24 O4 Si4



CM 4

CRN 77-63-4

CMF C28 H32 O4 Si4



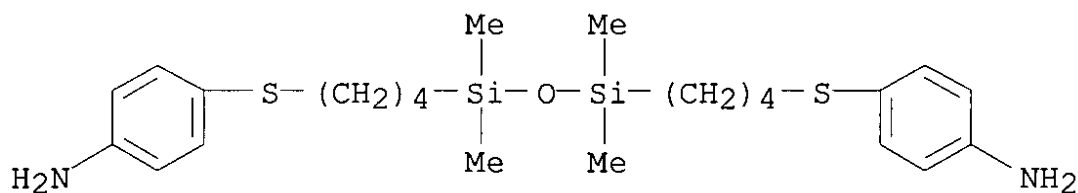
RN 83891-43-4 HCAPLUS

CN Benzenamine, 4,4'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)bis(4,1-butanediylthio)]bis-, telomer with octamethylcyclotetrasiloxane (9CI) (CA INDEX NAME)

CM 1

CRN 70159-83-0

CMF C24 H40 N2 O S2 Si2



CM 2

CRN 25037-57-4

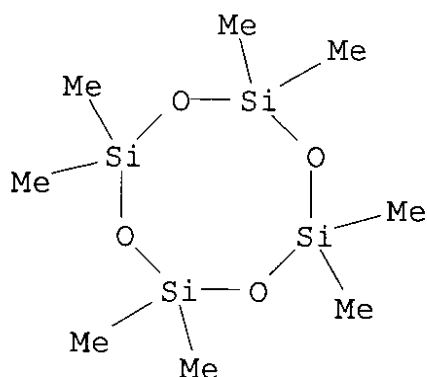
CMF (C8 H24 O4 Si4)x

CCI PMS

CM 3

CRN 556-67-2

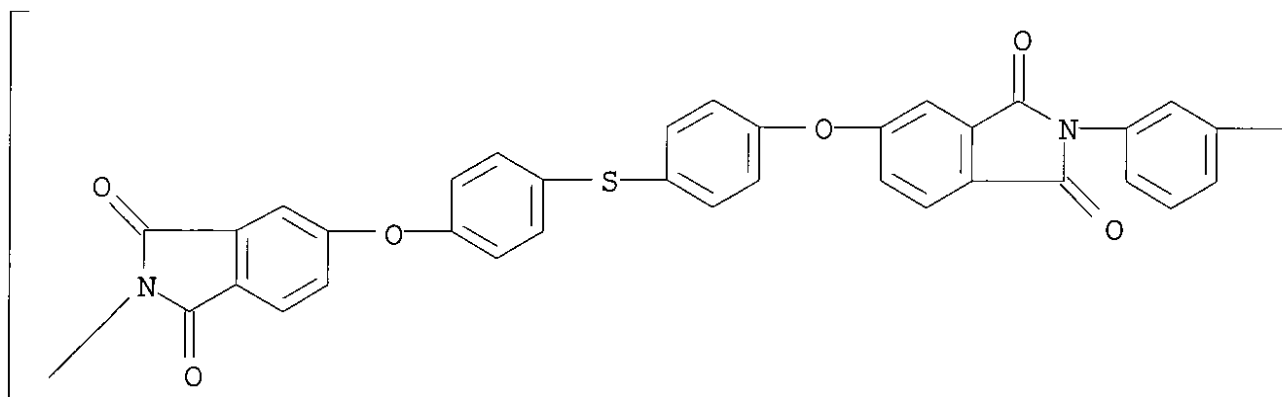
CMF C8 H24 O4 Si4



RN 83891-82-1 HCAPLUS

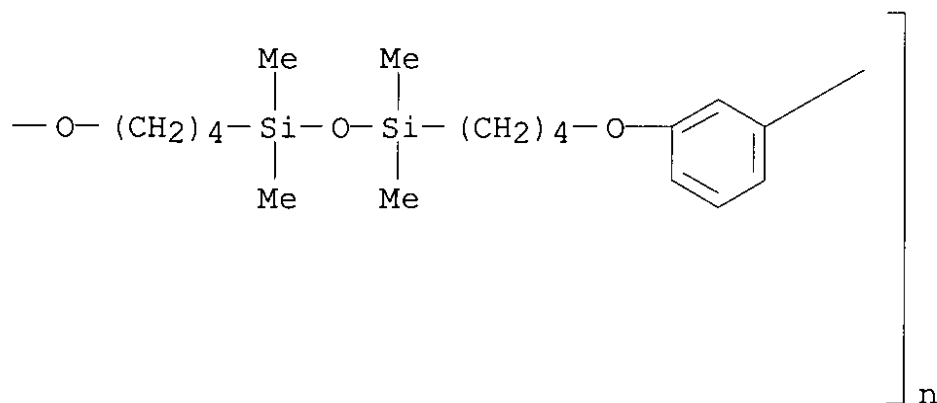
CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)oxy-1,4-phenylenethio-1,4-phenyleneoxy(1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,3-phenyleneoxy-1,4-butanediyl(1,1,3,3-tetramethyl-1,3-disiloxanediyl)-1,4-butanediyl]oxy-1,3-phenylene] (9CI) (CA INDEX NAME)

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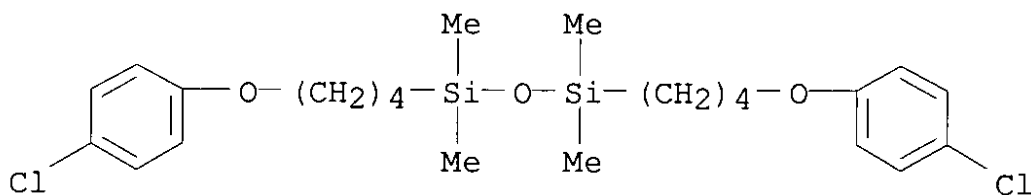
RN 83919-34-0 HCAPLUS

CN Disiloxane, 1,3-bis[4-(4-chlorophenoxy)butyl]-1,1,3,3-tetramethyl-,  
polymer with dichlorobenzene and sodium sulfide (Na<sub>2</sub>S) (9CI) (CA  
INDEX NAME)

CM 1

CRN 83919-33-9

CMF C24 H36 Cl2 O3 Si2

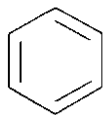


CM 2

CRN 25321-22-6

CMF C6 H4 Cl2

CCI IDS



2 ( D1-C1 )

CM 3

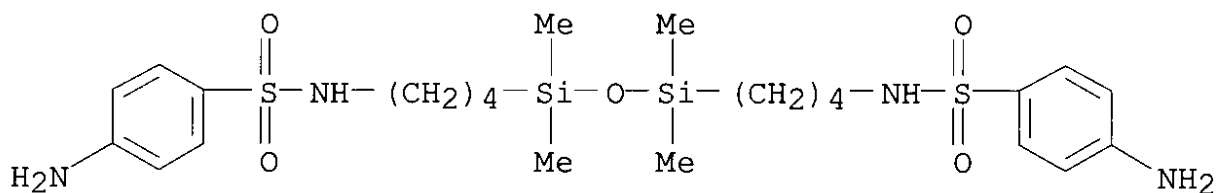
CRN 1313-82-2

CMF Na2 S

Na-S-Na

RN 83921-98-6 HCAPLUS

CN Benzenesulfonamide, N,N'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)di-4,1-butanediyl]bis[4-amino- (9CI) (CA INDEX NAME)

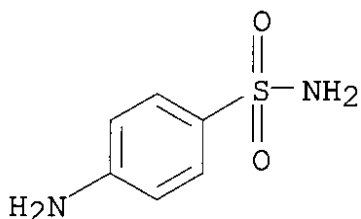


IT 63-74-1

(reaction of, with bis(chlorobutyl)tetramethyldisiloxane)

RN 63-74-1 HCAPLUS

CN Benzenesulfonamide, 4-amino- (9CI) (CA INDEX NAME)



IC C08G077-42; C07F007-08; C08G077-04; C08G077-26; C08G077-28;  
C08G008-08; C08G008-38; C08G018-61; C08G059-40; C08G063-68;  
C08G069-42

CC 37-3 (Plastics Manufacture and Processing)

IT 83874-52-6 83874-93-5 83874-94-6  
83874-95-7 83874-97-9 83891-18-3  
83891-20-7 83891-21-8 83891-23-0  
83891-26-3 83891-28-5 83891-29-6  
83891-44-5 83900-13-4 83900-14-5  
83945-26-0 83945-27-1 83945-28-2  
83945-29-3 83946-33-2  
(coatings)

IT 83874-98-0 83891-45-6  
(coatings, on ceramic plates)

IT 72403-27-1 83874-89-9  
(crosslinking of, by aminophenylacetylene)

IT 70159-84-1  
(elec. insulators, for wire)

IT 77-63-4DP, polymers with bis(aminophenoxybutyl)tetramethyldisiloxane  
s and cyclosiloxane 546-56-5DP, polymers with  
bis(aminophenoxybutyl)tetramethyldisiloxanes and cyclosiloxane  
556-67-2DP, polymers with bis(aminophenoxybutyl)tetramethyldisiloxan  
es and cyclosiloxane 13080-86-9P 17678-64-7P 72066-90-1DP,  
polymers with cyclosiloxanes 72066-92-3DP, polymers with  
cyclosiloxanes 76814-20-5P 83874-54-8P  
83874-56-0P 83874-57-1P 83874-58-2P  
83874-59-3P 83874-60-6P 83874-64-0P  
83874-65-1P 83874-66-2P 83874-68-4P  
83874-70-8P 83874-71-9P 83874-72-0P  
83874-73-1P 83874-90-2P 83874-91-3P  
83874-92-4P 83874-96-8P 83891-19-4P  
83891-25-2P 83891-30-9P 83891-35-4P  
83891-37-6P 83891-40-1P 83891-42-3P  
83891-43-4P 83891-82-1P 83919-34-0P  
83921-96-4P 83921-97-5P 83921-98-6P 83921-99-7P  
83922-00-3P 83922-01-4P 83922-02-5P 83922-04-7P 83922-06-9P  
83922-07-0P 83922-08-1P 83922-09-2P 83922-15-0P  
(prepn. of)

IT 63-74-1 95-65-8 99-93-4 102-29-4 106-41-2 123-30-8  
150-13-0 515-74-2 621-31-8 767-00-0 1193-02-8 2835-68-9  
(reaction of, with bis(chlorobutyl)tetramethyldisiloxane)